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PACKAGING REQUIREMENTS FOR
A SAMPLING MECHANISM FOR
SELF-SELECTION LIQUID FOUNDATION MAKEUP

BY
OSNAT LUSTIG

A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
MASTER OF SCIENCE IN THE DEPARTMENT OF PACKAGING SCIENCE
IN THE COLLEGE OF APPLIED SCIENCE AND TECHNOLOGY
OF THE ROCHESTER INSTITUTE OF TECHNOLOGY

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SIGNATURE OF THE AUTHOR O. Lustig

ACCEPTED BY _____

COLLEGE OF APPLIED SCIENCE AND TECHNOLOGY
ROCHESTER INSTITUTE OF TECHNOLOGY
ROCHESTER, NEW YORK

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FOR THE THESIS REQUIREMENTS FOR THE
MASTER OF SCIENCE DEGREE

David L. Olsson

Daniel L. Goodwin

Julian E. Yudelson Ph. D.

3-3-86

Date

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A SAMPLING MECHANISM FOR
SELF-SELECTION LIQUID FOUNDATION MAKEUP

by

Osnat Lustig

Submitted to the
Department of Packaging Science
in partial fulfillment of the requirements
for the Master of Science degree
at the Rochester Institute of Technology

ABSTRACT

The cosmetics industry and retailers of cosmetic products face a problem of sampling of packaged merchandise by inconsiderate shoppers in self-service retail outlets. The problem is particularly serious in facial products such as liquid foundation makeup. The consumer desires hands-on feel of the product in order to make an unaided purchase decision of the product, and will continue to sample packaged products as long as there are no other alternatives. However, cost and operation considerations of the cosmetics marketing system often precludes the availability of such alternatives. This study attempts to provide an evaluation tool which will focus on the packaging requirements, contribution, and constraints of a sampling mechanism for self-selection liquid foundation makeup, by which any new design concept of such mechanism may be evaluated thus confirming its appropriateness for a large scale implementation.

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Osnat Lustig

Rochester, New York
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INTRODUCTION

The cosmetics industry and retailers of cosmetic product face the problem of intrusive sampling of packaged cosmetics by inconsiderate shoppers in self-service retail outlets for the purpose of getting information about the product. The problem is particularly serious in facial products such as liquid foundation makeup (from here forward referred to as LFM). The "TYLENOL" tampering incidents of October 1982¹ brought the issue of product integrity and package integrity to the awareness of the industry and the public.

Cosmetics are defined as "Health and Beauty Aids", which give them the aura of medical prescription products; the consumer expects to find integrity and purity in every purchase he or she makes. Product integrity is a concern of the cosmetics industry as well, not only because there is no market at all for cosmetics in damaged packages, however slight, but also because of the risk of contamination from microorganisms which may cause spoilage or chemical changes in the product. One possible consequence of contamination being injury to the user and the resultant liabilities.²

In the cosmetics industry, the shifting away from full-service retail outlets and increase in self-service stores leads to less protection for the product. Intrusive

¹R.D. McFadden, "Poison Deaths Bring U.S. Warning On Tylenol Use" New York Times, October 2, 1982, pp. 1.

²J.M. Madden, "Microbiological Methods For Cosmetics", FDA Bacteriological Analytical Manual, 5th edition.

"sampling", as indicated by a tamper-evident feature, makes the product unsalable. Lack of such safeguard on the container, may introduce contamination to sterile contents, thereby creating a potential hazard for the user.

In cosmetics, as revealed by focus group participants¹, the area where most information is needed is in selecting LFM. When no testers are available, the consumers tend to make their own by opening packaged merchandise. The sampling process, therefore, is an indispensable factor in making a purchase decision for LFM.

The consumer's need to examine the product before purchasing has to be satisfied along with the need to build acceptance and salability for the product. The ability to sample has to be built into a self-service retail situation. A packaging controllable solution will beneficially apply to all aspects of the problem by:

- A. Reducing system cost through reducing the quantity of damaged products, and returns and lowering operation costs.
- B. Enhancing the product through unique forms of information transmittal.
- C. Educating the consumer not to "free sample", by satisfying his or her need for adequate hands-on examination of the product, in an acceptable fashion.

¹Focus group report is fully given in Appendix B.

D. Eliminating product contamination risks and product liability problems by providing maximum protection for product and package integrity.

CHAPTER I

ENVIRONMENTAL FOCUS

Consumer Behavior

Over the last two decades, twenty million women left full-time homemaking for careers.¹ These working women are now the major customers of self-service retail outlets. They are sophisticated shoppers who keep step with prescribed standards and fashion and have ample disposable income.

The increasing number of working wives (in 1985, mothers with children under six years old represented 53.5 percent of the working wives population versus 18 percent in 1960)² changed patterns in retail outlets to heavier traffic on weekends than on weekdays. Women in this group who may have once spent their middays at the department stores are more likely to remain in the office. The current lifestyle of working women -- mainly operating under constraints -- brought the era of

¹W. Abbott, "Beauty Finds New Outlets Of Expression", Advertising Age, February 28, 1983, 54:M-16.

²"Should Leaves For New Parents Be Mandatory?", New York Times, December 29, 1985, pp. 15E.

"one-stop-shopping", such as supermarkets or drug stores, which offer the convenience of good location and extended hours.

The growth in the number of working women, inflation, the energy shortage, and a resultant trend to one-stop-shopping may direct shoppers away from the less convenient, more expensive, high service department stores to self-service retail outlets which would, then, eventually become the major outlet for cosmetics.¹

Cosmetics as an impulse purchase

There is a greater demand for cosmetics because women are spending more time outside the home. Cosmetics sales rely a great deal on impulse purchases. Woman's Day Magazine and the National Association of Chain Drugstores conducted a study which showed that about one out of every two beauty-aid customers buys cosmetics on impulse occasionally or almost every time. The impulse purchase is generally brought about by "price, whimsy, display of information". Cosmetics is clearly classified as a high impulse product category -- 69 percent of all cosmetics purchases were made as the result of in-store decision (combining generally planned, substitute and unplanned purchases) and more than a third were unplanned.²

¹Abbott, "Beauty Finds New Outlets", pp. M-16.

²"Women's Shopping Habits In Chain Drug Stores Analyzed", American Druggist, September 1981, pp. 68.

Supporting these findings is another study done by POPAI/DuPont (1983) about buying habits in drugstores showing that out of a total of 57.4 percent in-store decisions, 39.4 percent were unplanned, and that of all cosmetic products purchases, 65.65 percent were made based on in-store decisions. This shows that visual promotional presentation of merchandise displayed in the store is a very important factor in generating future sales.¹

Cosmetics' market size and profile

A survey done by Redbook Magazine (1982) of the 24-35 age group showed that 70 percent of this group were users of foundation makeup and 49 percent were heavy users; 35 percent shop in drugstores, a factor which, according to the study, may relate more to convenience than to price.²

Drug Stores News' third annual consumer study (12/83) showed that more shoppers made their last purchase of cosmetics in drug stores (46 percent) than in department stores (12 percent).³

¹"Buying Habits Studied", Product Marketing, June 1984, pp. 1.

²"24-35 Market -- The Beauty Of Marriage And Career", Product Marketing, Spring 1982, 11:S-4.

³"Cosmetics departments Retain Market Supremacy", Drug-store News, December 12, 1983, pp. 59.

A study sponsored by the Cosmetic Toiletry and Fragrance Association (CTFA) and Savvy Magazine (1984) revealed that 78.5 percent of executive women are foundation makeup users who consider it an important part in projecting a professional image.¹

With the increasing number of working mothers, teens are doing the shopping for their mothers in drugstores and supermarkets and making brand decisions. Nearly fifteen million girls, twelve to nineteen years old, spend 4.9 billion dollars on beauty-aids annually (in this product category, there are 73.3 percent foundation users and 40 percent buy that product at drugstores).²

Total sales of LFM in supermarkets during 1982, according to a survey done by Chainstore Age/Supermarkets 1983, was \$34.66 million compared to \$26.45 in 1981 (+31.04 percent). A Madmoiselle survey (1979) showed that the average price paid for the last purchase of LFM was \$5.5 (10 percent were purchases under \$2; 31 percent were \$2-\$4; 20 percent were \$4-\$7; and 26 percent were \$7 and over).³

¹"Beauty Products Enhance 'Executive' Women's Image", Product Marketing, October 1984, pp. 1.

²I. Rosendahl, "Teen-Agers Buy More Beauty At The Drug Store", Drug Topics, February 7, 1983, pp. 72.

³"Health & Beauty Aids -- Cosmetics", Chain Store Age/Supermarkets, July 1983, pp. 157.

In that year LFM was purchased at the following retail outlets: department stores (55 percent), drugstores (31 percent), home agents (15 percent), discount stores (11 percent), supermarkets (4 percent), variety store (2 percent), and other (11 percent). This shows the significant of self-selection LFM purchases.¹

The recent trend in drugstores and supermarkets to carry better brands (moderately priced and/or higher priced brands) and upgrade the selection of health and beauty aids and the change in buying behavior of today's consumer shifted somewhat the above figures in favor of the self service outlets.²

Based upon the percentage using and the frequency of usage, the following was the ranking of ten cosmetics by a Madmoiselle survey (1979):³

1. Eye-shadow powder
2. Lash lengthener mascara
3. Liquid foundation makeup
4. Cake blusher
5. Automatic roll-on mascara
6. Cream blusher

¹"Toiletries, Beauty Aids, Cosmetics and Fragrances", Fairchild fact file, Fairchild Publications, Division of Capital Cities Media, Inc., NY, 1980.

²M. Shaffer, "Chain Wage Battle for Cosmetics Market", Drug Store News June 24, 1985, pp. 15; R.J. Rothstein, "How Much Should You Carry?" Drug Topics, May 15, 1981, pp. 30.

³"Toiletries, Beauty Aids, Cosmetics and Fragrances", 1980.

7. Stick blusher
8. Crayon pencil eye-shadow
9. Pressed face powder
10. Eyeliner pencil

Shopping patterns

"Cosmetics -- a preparation designed to beautify the body by direct application".¹ Unlike beer or soft drinks, where making a wrong decision would, at most, hurt the user's taste buds, walking out of the store after buying the wrong color of makeup could be offensive to the purchaser's ego. A cosmetics consumer needs the confidence of having made the best overall selection to create real satisfaction in her purchases. This is true for all segments of the population whether high income or low income consumers.

Women, in general, feel more confident making unaided decisions on color selection than on treatment products. To gather enough information to help make a purchase decision, the consumer relies on in-store promotional aids: advertising and shelf displays. One function of promotional techniques used at the retail level is to help the consumer choose, from among the many available alternatives, those which will best suit her individual requirements.

E.H. Demby, "How Marketing Research Can Help Avoid Missing Opportunities In The Cosmetic Jungle", Marketing News, January 16, 1976, pp. 5.

The relationship between product familiarity (prior knowledge of brands within a product category) and the ability to acquire information about a new product is that as the consumer gains experience in identifying more products in a certain product category, product familiarity grows and this affects the aquisition of new product knowledge. To help both the novice and the experienced consumers, to make a better unaided decision, information about product attributes, their importance, and their relationship to quality, must be provided.¹

Many packaged goods manufacturers consider sampling the best promotion vehicle to generate trial of the product. The potential user is enabled to make a judgment about the product and see a true demonstration of its effectiveness. Ideally, a self service store which has plenty of testers and mirrors in a well-lit area with a lot of "how-to" information from manufacturers, will create the best buying environment. In reality floorspace in drugstores' cosmetics departments is very scarce. Manufacturers' display units usually consume too much floor-space; there are "too many different units massed together, inefficiently staffed, are often in out-of-stock situation and even have self service units placed out of reach of the consumer".²

¹E.J. Johnson and J.E. Russo, "Product Familiarity and Learning New Information", Advances in Consumer Research, 1980, 8:151.

²"Drug Chain Brace For Cosmetics Revolution", Drug Topics, July 18, 1980, pp. 57.

The spatial limitation imposed on the shopper by the presence of other shoppers, and the physical structure of the store causes a decrease in shopping efficiency. Movement with traffic increases purchases of familiar products and less alternative evaluation in the decision making process.¹

Retailers are looking for versatile merchandising aids which allow more flexibility in adapting to specific store needs. The inevitable outcome is that some product information simply does not reach the consumer because of lack of display space for it.

Cosmetics companies which supply their own display units increase their sales, but other lines, not so well displayed, suffer. Operating costs prevent drugstores from providing self-service assisted by trained cosmeticians. There is a lack of manufacturers' support and coordination in terms of pre-selling aids such as advertising, P-O-P displays, improved packaging, more consumer education, and new products to satisfy the demanding new customer -- the working woman.²

¹G.D. Harrell and M.D. Hutt, "Crowding In Retail Stores", MSU Business Topics, Winter 1976, pp. 33.

²"Drug Chain Brace For Cosmetic Revolution", pp. 57.

Consumer Decision Making

Research has a significant role in marketing of consumer products. Having sufficient information about a design problem reduces risk and uncertainty in the process of new product development.¹ New ideas which are linked and related to consumers' needs -- feelings and concerns about a specific product category or characteristics -- would increase the probability of greater market penetration and achieving other business goals. Two preliminary steps would help to accomplish these goals:

- A. The first step is to identify the need by determining the degree of the need, the characteristics of the consumer, the characteristics of the task and the characteristics of the environment. Greater availability of information can assist the success of the product.

Some of the techniques used to provide specific information concerning problems perceived by consumers in their present method of achieving goals are as follows:

1. Depth interviewing -- unstructured interview following general outline of the subject but allowing the respondent considerable freedom in choosing ideas to discuss.

¹G. Binetti, "On Line Information Retrieval Aids New Product Development", Industrial Marketing Management, July 1980, vol. 9, pp. 247-251.

2. Formal survey -- Telephone or mail questionnaires to appropriate lists of individuals.¹
3. Focus groups -- Utilizing open-ended questioning about a specific subject, discussing problems, negatives, or usage habits of a product category, since consumers are usually unable to relate what needs they have. However, the sample size of the group is usually too small to permit generalization of the findings, but it can provide an estimate of the size of the market segment concerned about the problem under discussion.²

B. The second step is to define the needs in reference to the different variables which have been already identified and create an accurate objective criterion for evaluating alternative solutions. In evaluating different concepts the focus should be on the usefulness to the consumer rather than focusing on the uniqueness aspect. The concept should have the ability to meet the consumer's defined need. The properties which yield the performances are viewed as being subjectively evaluated by the user who determines the degree to which the particular product satisfies his or her needs. Evaluation of solution

¹S. Dutta and I. Rosenthal, "A Directory of Marketing Research", Audits and Surveys, 2nd edition, 1983.

²E.M. Tauber, "Discovering New Product Opportunities With Inventory Analysis", Journal of Marketing, January 1975, pp. 67.

concepts can be accomplished through physical simulation which will provide information on effects of a product's physical characteristics which are most critical to satisfaction.¹

The advantage of this technique is that it narrows the number of new ideas to those which have the greatest potential to satisfy a specific need, while screening out all the others. Having this information on hand would offer a solid basis for further development of the selected/screened new ideas.²

Contamination

Contamination causes spoilage and a spoiled product is unfit for use. The major source of contamination in cosmetics are the nose, mouth and skin. Many contaminants also find their way in through environmental elements -- air, water and dust. The industry has the knowledge and the ability to process the products so these spoilage microorganisms are destroyed. Nevertheless, even such precautions do not protect the product against the contamination which occurs upon opening the package and introducing environmental spoilage elements to the pure contents.

¹G.L. Smith and L.B. Archer, "A Methodology for Consumer Design," Proceedings of the Seventeenth Annual Meeting of the Human Factors Society, Santa Monica, CA, 1973, pp. 105-110.

²T. Cannon and R.W. Hasty, "Identifying and Defining Consumer Needs Using Human Factors and Market Research Techniques", Advances In Consumer Research, 1977, 5:494-498.

Infectious diseases associated with the use of contaminated cosmetic products were found to be related to the number of uses, personal habits of the user, and the formulation of the product. The subject has been considered extensively in the literature.¹

The physical effects of contamination result in toxic, irritating change of activity; visible effects (e.g. color); gas production; olfactory effects; taste, texture and audible effects (gas production may inflate a pouch and explode). Some types of products, such as liquids (e.g. aqueous solutions and suspensions), emulsions, creams and lotions may be more susceptible to contamination than others. Substances of natural origin (e.g. vitamins, animal protein), which are not only highly nutrient to the microorganisms and may inactivate preservatives, may also be a source of contamination.

Paper and cork closure liners may contain spoilage microorganisms. Plastics as packaging material for cosmetics can eliminate bacteria growth because they are not absorbent and will not absorb liquid that will provide substrate for moulds. On the other hand, plastics' considerably high WVTR

¹See L.A. Wilson and D.G. Ahearn, "Pseudomonas Induced Corneal Ulcers Associated With Contaminated Eye Mascaras", American Journal of Ophthalmology, 1977, 84:112-19; L.A. Wilson A.J. Julian and D.G. Ahearn, "The Survival and Growth of Microorganisms in Mascara During Use", American Journal of Ophthalmology, 1975, 79:506-601; L.J. Morse, F.P. Grenn, Jr., H.L. Williams, E.E. Eldridge and J.R. Rotta, "Septicemia Due to Klebsiella Pneumonia Originating From a Hand-Cream Dispenser", New England Journal of Medicine, 1967, 277:472-473.

(water vapor transmission rate) and GTR (gas transmission rate) allows diffusion of oxygen and water, thus allowing microbial growth in the packed product.¹

"Preservatives cannot always be relied upon to prevent the multiplication of microorganisms, and they are no substitute for good hygiene during production".² Contaminants are introduced to the product via processing, packaging materials, or elsewhere along the production line. Quality control takes care of most of them, but once the product is on the retail outlet shelf it becomes even more vulnerable.

Products are exposed to various forms of pre-purchase contamination caused by inconsiderate shoppers. The lack of safeguards on many products is a tempting reason to open the package for "inspection" without buying the item and then returning it to the shelf. The pure contents of the package may then be exposed to contamination, which may have originated from a cough, sneeze, dirty fingers or airborne particles.

Based on the previously given information, it is safe to say that pre-purchase contamination is a foreseeable risk and should steps be taken to protect the consumer from that risk, they will also minimize manufacturer's liability exposure, as

¹J.C. MacChesney, Packaging of Cosmetics and toiletries Butterworth, London, 1974, pp. 21.

²R. Smart and D.F. Spooner, "Microbiological Spoilage in Pharmaceuticals and Cosmetics", Journal of the Society of Cosmetic Chemists, 1972, 23:721-737.

well as discouraging "sniffers". A tamper-evident feature on the package will indicate that the package has been opened and therefore might be hazardous to the user and hence should not be purchased.

Today's technology provides numerous options for tamper-evident features -- blister packs, shrink wraps, and inner-seals to name a few. Describing similar problems concerning food products in supermarkets, the American Public Health Association urged federal agencies such as FDA and USDA to "become more concerned with tamper proofing of containers and be more explicit in the terminology in existing regulation....to protect the health and welfare of the consumer."¹

The Tylenol tampering incident in Chicago,² brought into new focus the vulnerability of packaged products on the retail outlet's shelf. The FDA's tamper-evident packaging regulation essentially required tamper-resistant and tamper-evident packaging for specifically identified products, including all O-T-C drug and cosmetic liquid oral hygiene products and vaginal products for retail sale.

¹W. Litsky, "Insuring Food Quality by Tamper-Proof Packaging", paper presented at the 107th Annual meeting of the American Public Health Association (APHA), New York, NY, November 6, 1979.

²McFadden, New York Times, pp. 1

By May 5, 1983, all affected products had to be packaged in tamper-evident packaging and include a distinctive design or logo and a label tamper-evident advising the consumer not to buy or use the product if the tamper-evident feature is breached or missing.¹

Following the idea that food products may be viewed as vulnerable as O-T-C drugs (and so may many other products that are used on the body), an increasingly large share of the overall market of consumer products, including cosmetics, is now using tamper-evident packaging as more manufacturers strive to maintain consumer confidence and trust in the safety of their products.

¹P.M. Hyman, "Legal Considerations Of Tamper Resistant Packaging for Cosmetics", Soap/Cosmetics/Chemical Specialties, July 1983, pp. 56.

CHAPTER II

METHODOLOGY OF THE STUDY

Identification Of The Problem

As seen in the first chapter, the real problem is a conflict of interests between two groups -- the consumer versus the cosmetics marketing suppliers including retailer and supplier/manufacturer. The retailer and supplier/manufacturer want to gain profit from sales and reduce the amount of merchandise which is unsalable due to damage. Often the consumer causes this damage in trying to sample LFM before making a purchase decision.

The need to sample the product may impair the integrity of the packaged product at the retail level, and a damaged tamper-evident feature on a package will only indicate that the package has been tampered with and is therefore unsalable. This solution alone will not satisfy the consumer's need for sampling the product before making a purchase decision and may create a negative effect on sales and the value of inventory.

On the other hand, the retailer finds great difficulties in providing ample shelf-space for promotional P-O-P units

because of the limited overall display area, thus undermining supplier/manufacturer's promotional effort which leads to the inevitable loss of profit and waste of capital investments.

This study will address the problem of determining the packaging considerations (principles and/or requirements) of a sampling mechanism for self-selection LFM sold in self-service retail outlets, which will satisfy the consumer, the retailer and the supplier/manufacturer. The solution to the problem should achieve the following:

- A) It will enable the consumer to sample LFM, thus providing her with enough information to help her make an unassisted purchase decision. It will protect product integrity by eliminating the need to open the package and examine the product prior to purchasing, so the amount of unsalable and/or damaged merchandise due to tampering will be reduced.
- B) It will provide the retailer with an economical and versatile floor unit requiring a minimum amount of maintenance, which can be integrated into the overall layout of the store and will generate substantial number of sales per square foot.
- C) It will be cost effective and compatible with existing high volume production and packaging equipment and technology.

Definition Of The Problem

Certain procedural steps will need to be taken in order to provide a model by which the packaging requirements of sampling mechanism for LFM can be evaluated.

How to improve sampling procedure/system for LFM?

The following interested parties provide a basis for evaluation of any improvement in the LFM marketing system:

1. Consumers who buy LFM in self-service retail outlets.
2. Retailers who sell LFM in self-service retail outlets.
3. Suppliers who supply LFM to self-service retail outlets.

What are the physical variables which contribute to the perceived level of satisfaction of each one of the primary subjects of the study?

1. consumer -- The consumer has four primary concerns:
 - a) Availability of sampling material.
 - b) Visibility and accessibility.
 - c) Ease of sampling.
 - d) Accuracy of information from sampling.

2. Retailer -- The retailer has four primary concerns:

- a) High density of merchandise (maximum items/sq. ft. of selling area).
- b) Minimum maintenance (repair, breakage, pilferage, cleanliness, restocking).
- c) Flexibility (movable component parts or multi-purpose mechanism integrated with the display structure).
- d) Minimum assistance by salesperson.

3. Supplier -- The supplier has five primary concerns:

- a) Number of components of the package system.
- b) Cost of primary materials.
- c) Cost of operation.
- d) Cost of packaging.
- e) Development of future sales potential.

The solution should answer the specific requirements described in the problem identification. Extraneous influencing factors are assumed to be constant and will not be included at this stage.

Examples of these extraneous variables for each level of the system are as follows:

a. Retail level:

-- Operation characteristics such as traffic flow, number of employees, maintenance of displays, store budget, merchandise mix, etc.

-- Layout characteristics such as display fixtures, inventory positioning, display capacity, etc.

-- Market activities such as store type (self service) and image, promotional efforts of the store, and manufacturers (brand competition, pricing, advertising, etc.).

b. Distribution level

-- Geographical location of both distribution center and retail outlet, distribution hazards (assume normal shipping conditions), long term performance (packaging material's compatability with contents, durability), operation costs and industry standards(*).

c. Production level

-- Time and cost of R&D, cost and availability of primary materials, cost of processing (*).

(*) All costs related to production and distribution will be included in the final cost of the individual components of the packaging system.

How to evaluate current and proposed solutions for
sampling LFM?

The methods used to solve the problem of evaluating alternative solutions are as follows:

1. A survey of consumers was done utilizing focus-group technique.¹
2. A survey of retailers provided views through interviews with retailers of cosmetics.²
3. A review of system-cost of proposed and currently used sampling systems.³
4. A review of related packaging problems provided examples of solutions to similar problems in other areas of the industry.⁴

Predicting/determining the effect of product changes on elements in the objective and perceptual space will require first establishing a set of relevant criteria/factors that will measure this effect. Each factor is presumed to be "valued" in the sense that differences in levels on this factor (while

¹A full report is given in appendix B.

²A full report is given in appendix E.

³A full report is given in appendix F.

⁴A full report is given in appendix G.

other factors remain constant) lead to differences in the overall evaluation of the sampling technique under discussion. The specificity of each factor (subdivide each factor to lesser components) is to be considered. Ranking provides scale values for each of the factors, thus determining their relative importance to the overall evaluation and identifying the "best" level of each factor. The factors used to evaluate any solution are as follows:

1. Extent of sampling (ES).
2. Amount of information (AI).
3. Degree of assistance by sales person (DA).
4. Cost to the consumer (CC).
5. Cost to the retailer (CR).
6. Cost to supplier/manufacturer (CS).

What current and proposed solutions are there for the problem?

The following solutions which provide information about LFM were selected as the best representatives of the common techniques used for sampling LFM. Other solutions were not included because of obvious lack of feasibility and user's acceptance.

The packaging industry has dealt with problems of low-value small individual packaging in a number of ways such as unit-dose packages and various pouch-structures. Every solution has distinct advantages and disadvantages from the packaging and marketing systems point of view.¹

¹A full report is given in appendix G.

Packaging solutions

1. No sample -- Commercial size packaged LFM with LFM-shade identification available only on the package in color or verbal description.
2. One sample -- Commercial size packaged LFM displayed with one sampling unit for in-store dispensing.
3. One sample + printed color chart -- commercial size packaged LFM displayed with one sampling unit for in-store dispensing and a printed color chart of other available LFM shades.
4. Trial size package -- Miniature size packaged LFM containing enough product for a few sample applications.
5. Free samples -- LFM unit-dose sampling packets.
6. N-dispenser P-O-P display -- A display holding in-store dispensing units for an entire line of LFM shades.

Non-packaging solutions

1. Full service -- Customer supporting activities provided by store personnel.
2. Graphic techniques -- High quality printed color chart of available LFM shades.

Evaluation and Results

Table 1 presents a preliminary review of packaging and non-packaging solutions and their relative cost comparison. All scale values are highly subjective and based on a judgmental evaluation of each factor. These values may be each company's specific and dependent on resource availability. This report is a general evaluation by the author. The measure of the magnitude of an effect ranges from -2 to +2 (-2/-1/0/+1/+2) where -2 represents the lowest scale value and +2 represents the highest scale value.

1. Solution 1 (no sample) represents low cost, low level of consumer-benefits and high level of convenience to the retailer, because it does not require special maintenance.
2. Solution 2 (one sample) offers a higher level of consumer benefits and therefore requires more attention from the retailer, which lessens the degree of his convenience. The supplier provides promotional material which requires capital investment and expenses.
3. Solution 3 (one sample + printed chart) offers an even higher level of consumer benefits (the amount of information which can be retrieved from the display with the aid of the printed color chart). The additional components in the system do not affect the level of retailer's convenience, but do increase supplier's capital investment and expenses.

4. Solution 4 (trial-size) offers a high level of consumer benefits and the largest amount of information about the product. There is a drawback in the fact that the information is available only for the sample purchased. The retailer has to maintain the display and keep it in in-stock condition as well as purchase the material from the supplier (in some cases). The supplier's investment is high and the direct cost of the promotional material is usually not self-liquidating, and has to rely on future sales.
5. Solution 5 (free samples) can be very attractive to the consumer, when available, as it is given away free of cost. However, the information provided is for a specific shade in the sample. Maintaining in-stock condition of the display may lower the degree of convenience for the retailer and the supplier may be required for a high capital investment and expenses.
6. Solution 6 (n-dispensers in P-O-P) offers the highest level of consumer benefits by providing sampling of all the shades available, as well as maximum information about the product with no further assistance. The display requires maintenance, tends to be messy and frequently consumes much shelf space. These factors lessen the degree of retailer's convenience. The supplier would find this technique the costliest, due to the number of components, primary materials, operation and handling.

7. Solution 7 (full-service) would provide the consumer with maximum ES and AI but the full service given by salesperson is not always desirable to the consumer who does not seek any in this type of outlet. The trained personnel required for this task lowers the level of convenience of the retailer due to his cost per service. The supplier who provides promotional material has to invest capital and expenses.
8. Solution 8 (graphic techniques) offers the consumer a moderate level of benefits, though no way of physical sampling is available. Quality graphic reproduction will assure retrieval of accurate information by the consumer. This technique is very convenient to the retailer and has a moderate production cost.

TABLE 1
PRELIMINARY REVIEW OF ALTERNATIVES AND
RELATIVE COST COMPARISON

PACKAGING SOLUTIONS	ES	AI ³	DA	CN ²	CC ¹	CR ¹	CS ¹
No Sample	-2	-2	-2	+2	-2	-2	-2 ³
One Sample	0	0	-2	0	-2	-2	+1
One Sample + printed chart	0	+1	-2	0	-2	-1	+1
Trial size	+1 ⁵	+2 ⁵	-2	+1	+1	+1	+2
Free sample	+1 ⁵	+2 ⁵	-2	0	-2	-2	+2
N-dispensers in P-O-P display	+2	+2	-2	-1	-2	-1	+2
NON-PACKAGING SOLUTIONS	ES	AI	DA	CN	CC	CR	CS
Full-service	+2	+2	+2	-2	-2	+2	0
Graphic techniques (printing)	-2	0	-2	+2	-2	-2	0

- (1) All relative costs represent investment (fixed and variable costs) and do not reflect return on investment.
- (2) Factor is further sub-divided in table 2.
- (3) Factor is further sub-divided in table 3.
- (4) Cost is included in the primary package's total cost.
- (5) Information is given for the specific shade in the package.

ES - Extent of Sampling. The availability of sampling material, accessibility, visibility and ease of dispensing.

AI - Amount of Information, as retrieved from the promotional display by the customer, measured by the degree it meets her needs and whether it leads to easy self-selection.

DA - Degree of Assistance by sales personnel.

CN - Convenience of the retailer. The extent of maintenance, repair, cleanliness and ease of set-up.

CC - Cost to the customer (per item).

CR - Cost to the retailer (per service).

CS - Cost to the supplier/manufacturer (per # of primary materials, operation, production and packaging).

TABLE 2
CONVENIENCE TO RETAILER¹

	Ease of set up	Cleanliness	Weighted value
1. Carded package	+2	+2	
Primary container (bottle)....	+2	+2	+2
Cartoned primary container ...	+2	+2	
2. Pump dispenser	+1	-2	0
Pump dispenser + POP display .	+1	-2	
3. Pump dispenser + color chart .	+1	-2	0
4. Primary container in POP	-1	+2	
Primary container in bin	+2	+2	+1
Carded package in POP	-1	+2	
Carded package in bin	+2	+2	
5. E.g. pouch, unit-dose blister	2	+2	0
6. N-dispensers in POP display ..	0	-2	-1
7. Full-service (salespeople) ..	use of floor-personnel		-2
8. Graphic techniques (printing)	+2	+2	+2

¹convenience to retailer is subject to the complexity of the specific design.

TABLE 3
AMOUNT OF INFORMATION

	Information at a glance	Easy self- selection	Weighted value
1. Carded package	-2	-2	
Primary container (bottle)....	-2	-2	-2
Cartoned primary container ...	-2	-2	
2. Pump dispenser	0	-1	0
Pump dispenser + POP display .	+1	0	
3. Pump dispenser + color chart .	+1	+1	+1
4. Primary container in POP	-1	+1	
Primary container in bin	-2	+2	+1
Carded package in POP	0	+1	
Carded package in bin	-2	+2	
5. E.g. pouch, unit-dose blister	0	+1	+1
6. N-dispensers in POP display ..	+2	+2	+2
7. Full-service (salespeople) ..	+2	+2	+2
8. Graphic techniques (printing)	+1	-1	0

The amount of information (AI) retrieved from LFM store display by the consumer is in direct proportion to the extent of sampling (ES) and therefore the latter is the most important variable which contributes to consumer benefits (satisfaction). Figures 1 to 8 show the relationship between the extent of sampling (ES -- vertical axis) and the variables which concern the cosmetics marketing system (cost, convenience, and degree of assistance -- CR, CS, CN, DA -- horizontal axis).

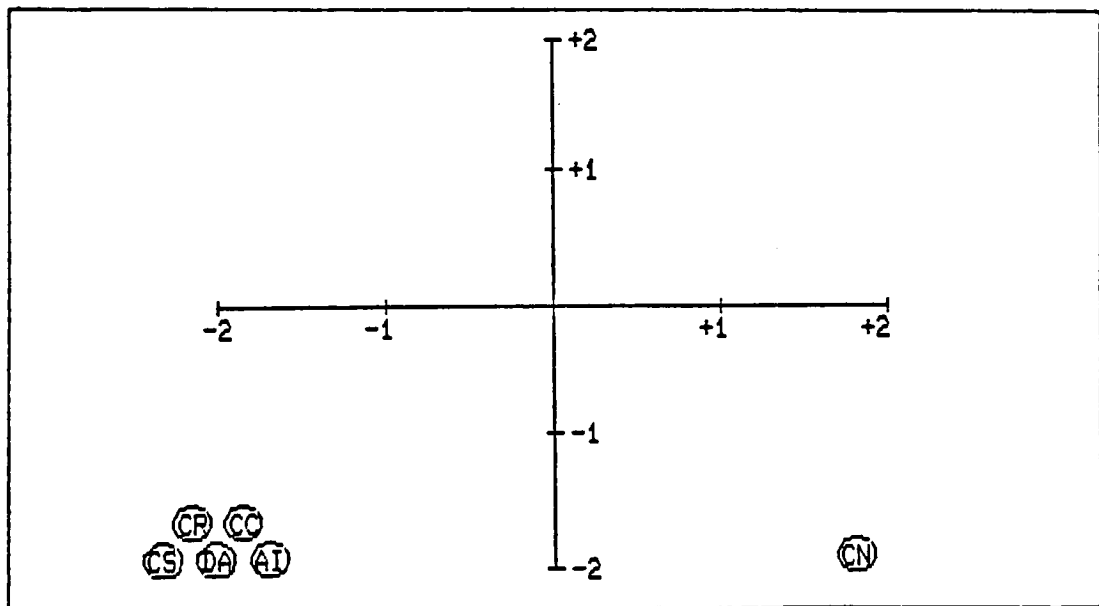


Figure 1 -- No Sample

Figure 1 shows that when there is minimum ES, the CN is high and the system cost is low but there is also low level of consumer benefits (AI).

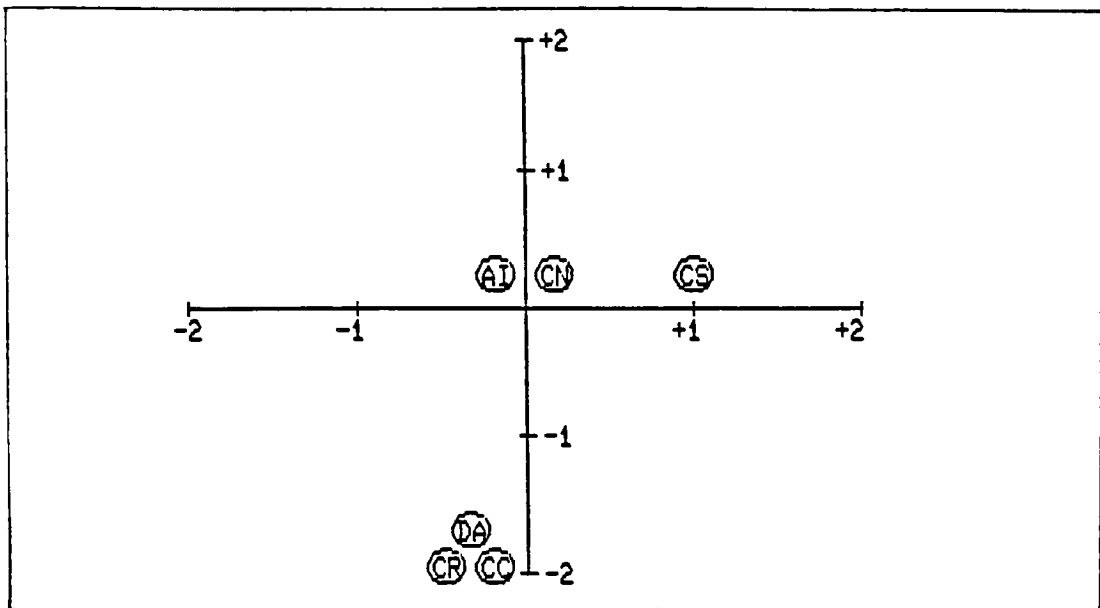


Figure 2 -- One Sample

Figure 2 shows that moderate ES may increase system cost (DA;CR;CS) but adds to consumer benefits (AI) as well.

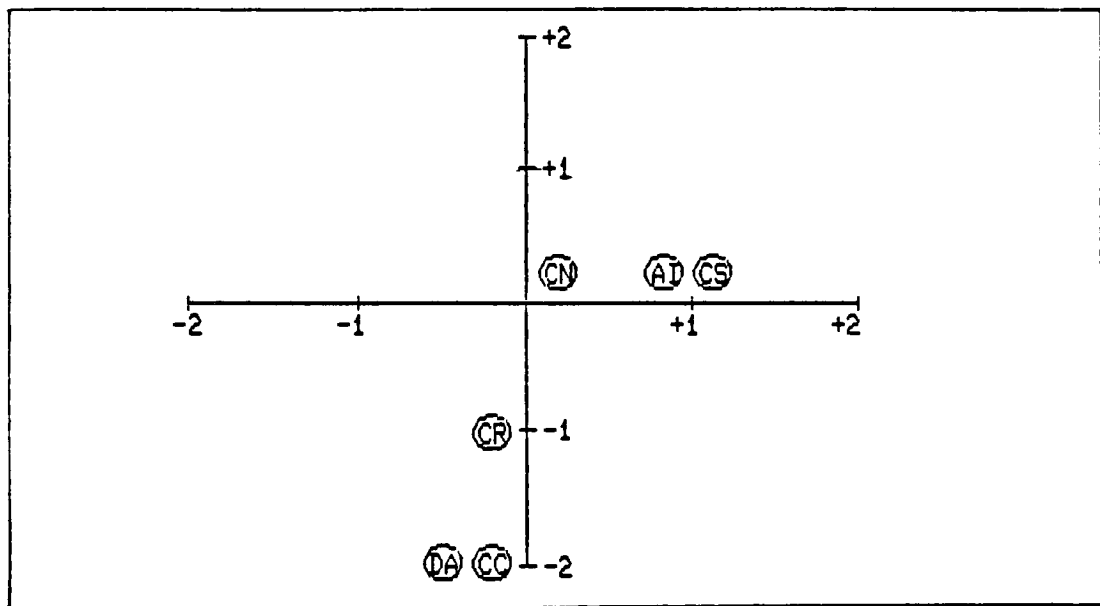


Figure 3 -- One Sample + Printed Chart

Figure 3 shows that moderate ES in a system which contains more components may increase the system cost (DA;CR;CS) at the supplier's end but will leave all other factors unchanged.

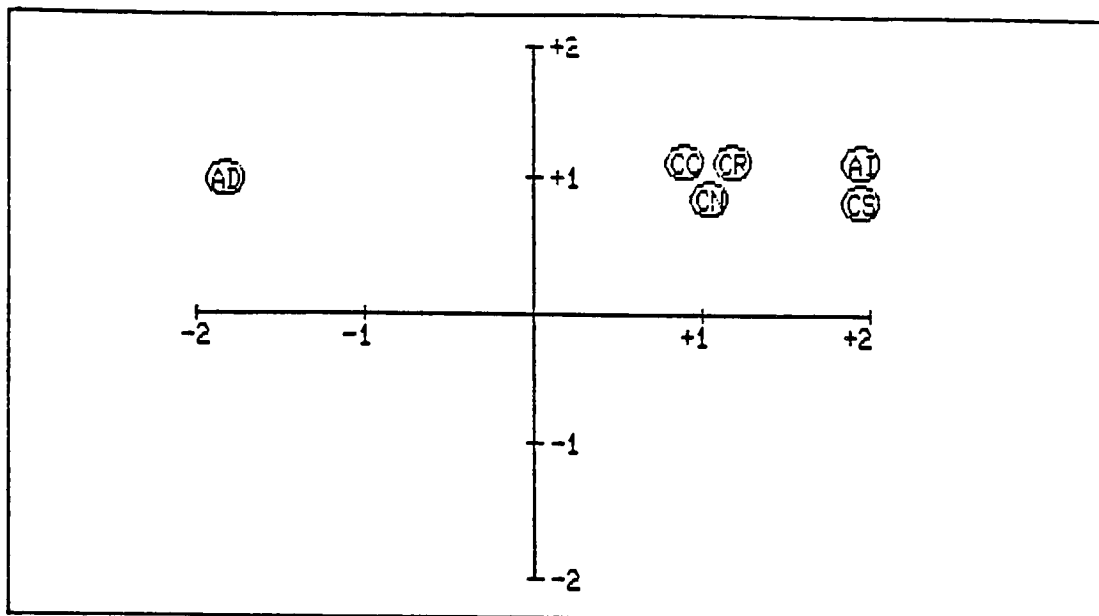


Figure 4 -- Trial Size

Figure 4 shows that a greater ES may lead to higher system cost (DA;CN;CR;CS)while increasing consumer benefits (AI). The drawback of this technique is that AI and ES are provided for the specific shade purchased and do not apply to any other product in that cosmetic line.

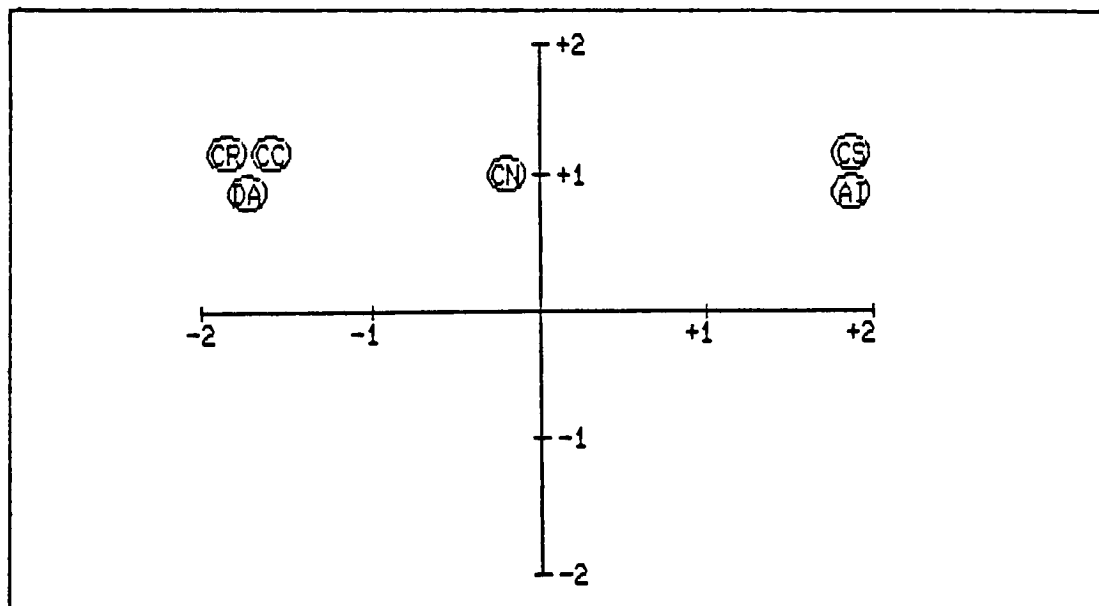


Figure 5 -- free samples

Figure 5 shows that higher ES may increase consumer benefits (AI). However, not having CC and CR would increase system cost at the supplier's end (CS).

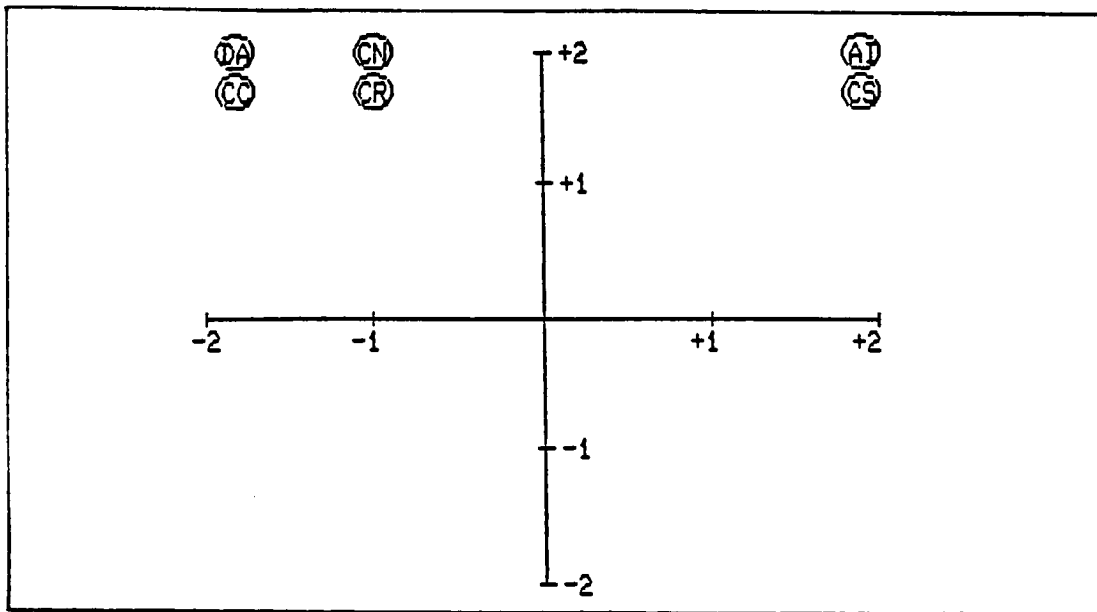


Figure 6 -- N-dispensers in P-O-P Display

Figure 6 shows that high ES increases consumer benefits (AI) but system cost (CR;CS;CN) as well, especially at the supplier's end (CS).

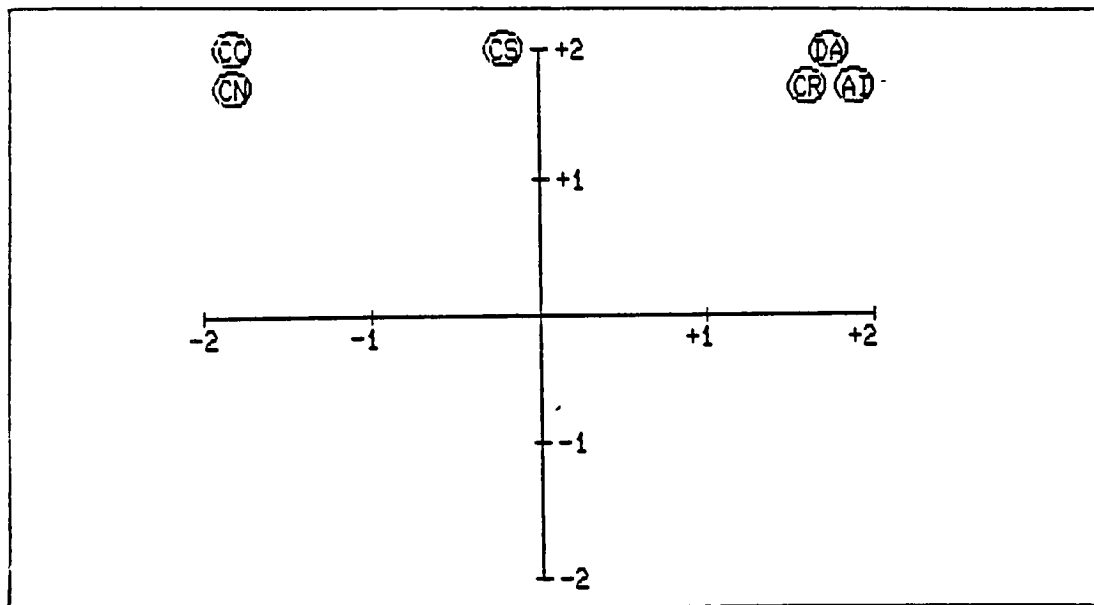


Figure 7 -- Full Service

Figure 7 shows that high ES through full service would increase consumer benefits (AI) but would also increase system cost (CN;DA;CR;CS) especially at the retail end.

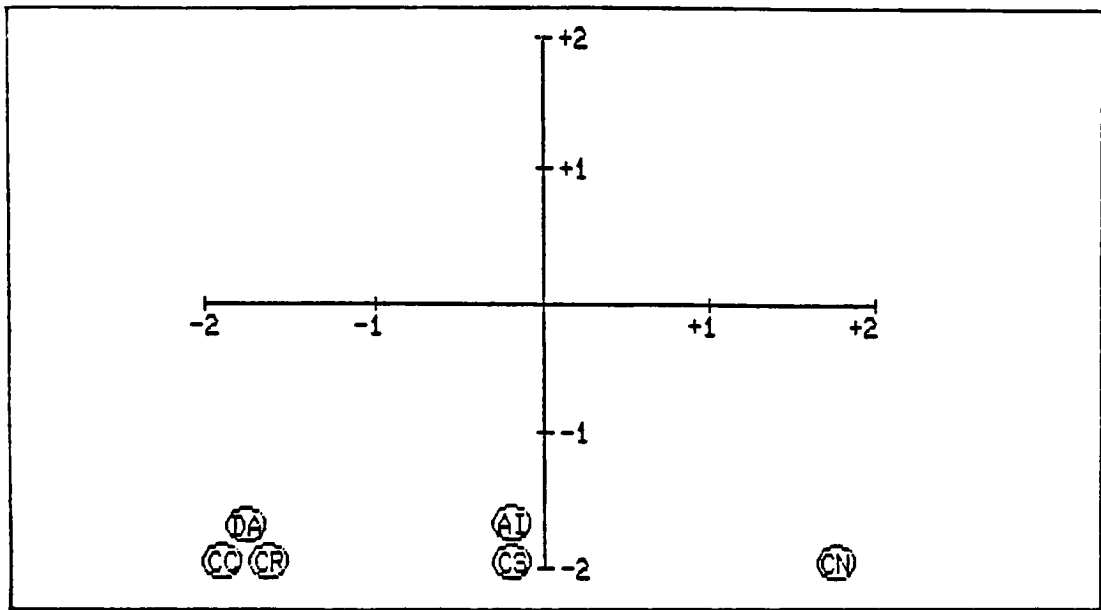


Figure 8 -- Graphic Techniques

Figure 8 shows that the use of graphic techniques would not allow any ES but would provide moderate-high AI and low system cost (DA;CR;CN;CS). However, the lack of hands-on feel of the product and the customer's mistrust in the quality of graphic reproduction may not make this technique a stimulant for purchasing of color cosmetics.

The purpose of the ordinal rating method developed in this chapter was to identify the most relevant factors which make an existing system or a proposed current solution the best choice. The selected solution would create net cost improvement in the system -- an increase in net operating profit and net earnings for both retailer and supplier/manufacturer, while maintaining high consumer benefits (satisfaction). The initial evaluation addressed several subjective variables:

- A. Extent of sampling (ES)
- B. Amount of information (AI)
- C. Degree of assistance (DA)
- D. Convenience (CN)
- E. Cost to the consumer (CC)
- F. Cost to the retailer (CR)
- G. Cost to the supplier/manufacturer (CS)

However, a closer look at the relationship between the consumer and the cosmetics marketing system (retailer and manufacturer) reveals that these variables can be condensed to two dimensions:

- A. Consumer benefits (ES;AI;CC)
- B. System cost (CN;DA;CR;CS)

The most important factor to be considered is consumer benefits, since any decline in sales may have a negative effect on the entire system.

Figure 9 shows how the various systems relate to each other in cost and benefits. The data can be further subdivided into four sections:

1. High consumer-benefits / High system-cost.
2. High consumer-benefits / Low system-cost.
3. Low consumer-benefits / Low system-cost.
4. Low consumer-benefits / High system-cost.

These sections are considered respectively as profitable (if subjects are willing to pay the cost), very profitable, low-profitable, non-profitable. Since the purpose is to increase overall net earnings within the cosmetics marketing system's physical and environmental constraints, the prescribed approach should be to shift away from the median toward the profitable areas of the data matrix, thus lowering system-cost while maintaining high degree of consumer-benefits.

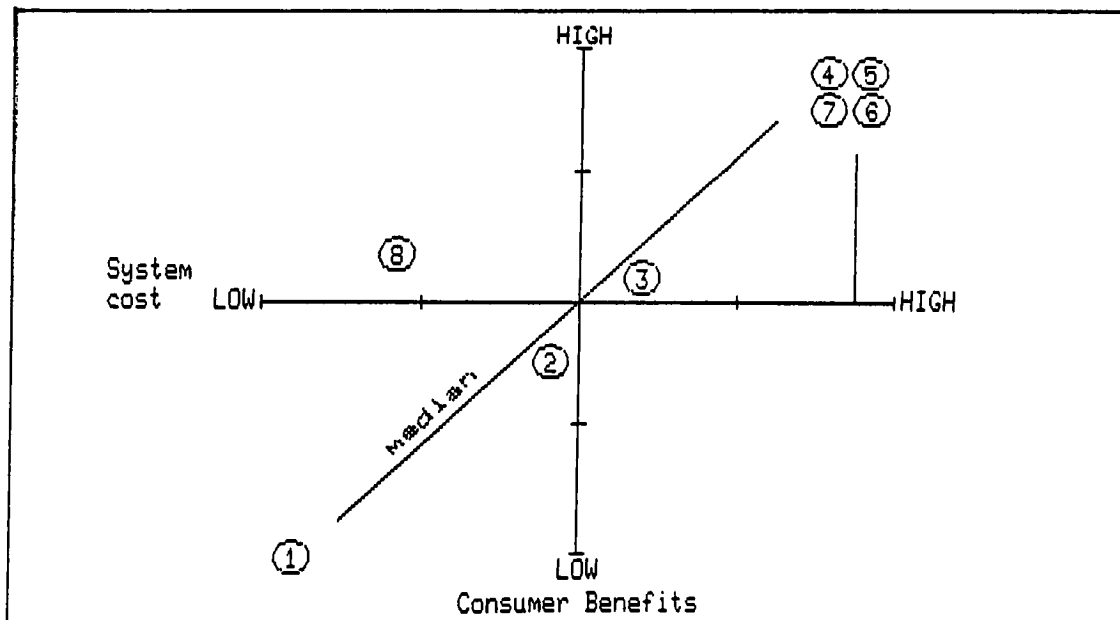


Figure 9

Focus-group participants admitted that paying a modest price for a trial-size is very acceptable. However, trial-sizes, in most cases, contain one shade of LFM in a package-volume that would allow about fifteen applications.

The marketing risks of such a technique are several: The consumer might continue to purchase only the convenient and inexpensive trial-size; if the shade selected was wrong the first time, there may not be any repeat purchase at all; the direct costs might not be justified by subsequent sales.

An alternative, feasible solution can be demonstrated by exercising the method of evaluation which was established in this study. The solution might be an increase in the cost of the operation in a way that will maintain a high level of consumer-benefits but will lower the overall cost of the system, as demonstrated in Figure 10.

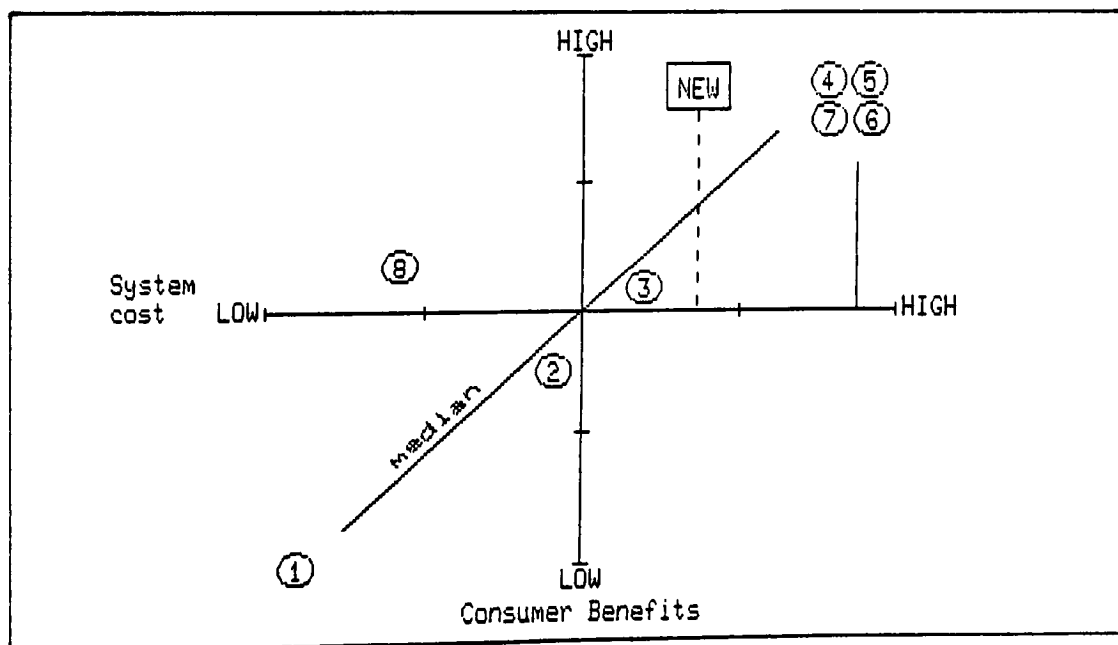


Figure 10

Fabricating a packaging system that will be retailed as a trial size within the acceptable price range and will contain a smaller amount of all LFM shades available, enough for two or three applications, may prove to be an effective solution for the following reasons:

1. High consumer benefits -- maximum ES and AI, moderate CC.
2. Package leads to an easy self selection since all shades are available in trial size. Once the appropriate shade is selected by the consumer (and perhaps one or two additional shades to match season or cosmetic corrections), the consumer purchases the commercial size unit. The trial size can be retained for future reference or thrown away.
3. The benefits to the system are not negligible, either. The retailer does not attend such a display more than he would in solutions 2-6, and the profit earned by retailing the trial-size lessens the operation cost. By allowing a "take-home" sample of all shades available for selection, there will be a cutback on tampering with packaged merchandise, and in the long run cutback on returns due to right choice the first time.
4. The supplier/manufacturer's direct costs are partially self-liquidating by the large volume of sold promotional material and overhead and R&D by future sales. Procedures and equipment have been developed for producing packaging systems based on the proposed principle (such as fusion

molding, various FFS techniques, etc.). Technical facilities and procedures will have to verify the adequacy of any proposed alternative as to its compatability and protection, production line efficiency, and resistance to distribution hazards.

CHAPTER III

CONCLUSIONS AND RECOMMENDATIONS

The study was designed to establish a criterion or model which would be used to evaluate alternative solutions to the problems inherent in finding solutions to problems of sampling LFM. Determining these guidelines will provide a certain feedback that will alert the manufacturers to users' (retailers and consumers) viewpoints on sampling mechanisms convenience, safety, functionality and performance, and provide a tool to measure the relationship between consumer benefits and system cost (retailer and supplier/manufacturer benefits). The study was accomplished in several major parts:

- A. Retail sites visits and meeting with retailers to identify the environment of the problem.
- B. Focus groups conducted at the Marion Simon Research Service's facility to establish consumers' concerns and priorities.

- C. Review and evaluation of currently used sampling techniques to determine factor appropriate for selecting among alternative solutions.

In analyzing the relationship between consumer benefits and system cost, it was noteworthy that the data generated and the conclusions in this study were highly subjective and may be in opposition to other subjective viewpoints. However, it should be noted that the conclusions were tentative in nature for the following reasons:

- A. The solutions selected for evaluation were chosen as a representative of similar currently-used techniques and therefore only a general estimation of parameter value could be made about the relationship between cost and benefits.
- B. The evaluation was of concepts only, and specific systems might react differently to product changes.

The ordinal rating method which was developed in this study gives subjective data that should be utilized in the preliminary evaluation of any proposed solution. However an anticipated cost improvement or any other benefit should be large enough to justify the cost of testing it before its large scale implementation.

The objective of using this method was to create net cost improvement in the system and to identify and (hopefully) avoid tradeoffs that could cause downstream cost increases which would counterbalance other savings (e.i. lowering consumer benefits hence reducing further sales).

In evaluating packaging and non-packaging systems while using the proposed method of evaluation, it was found that some solutions such as free samples and a single in-store dispensing unit, have unacceptable second level costs. The following packaging solutions, if implemented, are anticipated to decrease both the tangible and intangible costs associated with sampling and significantly increase consumer's benefits:

- A. Trial-size unit which contains samples of several available shades (increases retailer's net earnings and net operating profit while maintaining high consumer benefits).
- B. N-dispensers in P-O-P display (increases net operating profit and maintains high consumer benefits).
- C. Trial-size unit which contains sample of one shade only (increases retailer's net earnings and net operating profit).

The focus of this study was mainly on the consumer's interests because of her evident importance in the overall marketing process.¹ Nevertheless, further research should be done to assess the role of retailer's involvement in communicating and responding to the supplier/manufacturer's marketing effort, which were both assumed for the purpose of this study.

If there is insufficient cooperation and communication between retailers and suppliers/manufacturers, the implications to the industry may be, as speculated, the retailers' rejection of some manufacturer's proposed solutions due to conflicting interests which could lead to increase in system cost (by not using manufacturer's promotional material) and a lesser amount of information available for the consumer (decreased satisfaction).

¹A full report is given in Appendix H.

APPENDIX A

GLOSSARY

AISLE - Space devoted to customer and/or materials circulation within the selling area.(*)(*)

AMOUNT OF INFORMATION (AI) - As retrieved from the promotional display by the customer, measured by the degree it meets her needs and whether it leads to easy self selection.

BUYING BY SAMPLE - Purchase after examination of a representative piece or portion of the good. Applicable where the product is reasonably uniform because of standardized grading or manufacture.(*)

CONVENIENCE (CN) - Of the retailer. The extent of maintenance, repair, cleanliness, and ease of the display set-up.

CONVERTIBILITY - A technique of fixturing that includes flexibility as well as the facility to change merchandise presentation. (e.g., hanging to shelving). (*)(*)

COST OF SAMPLING - (CC) to customer (per item). (CR) to retailer (per service). (CS) to supplier/manufacturer (per # of primary operation, production and packaging.

DEGREE OF ASSISTANCE (DA) - Degree of assistance by a salesperson.

DENSITY - The ratio of the area occupied by selling fixtures to the total area of selling space.(*)(*)

EXTENT OF SAMPLING (ES) - Availability of sampling material, accessibility, visibility and ease of dispensing.

FLEXIBILITY - A technique of fixturization in which the component parts are movable and not attached to the structure. (*)(*)

FIXTURE - Selling equipment designed to display, present and store the merchandise.(*)(*)

GLOSSARY

FIXTURE TYPE - The designation and design of selling equipment to achieve appropriate presentation according to the special requirements of merchandise classifications. (*) (*)

GONDOLA - A fixture located on the selling floor arranged for self-selection presentation of merchandise, frequently designed to be convertible. (*) (*)

IMPULSE SELLING - The technique of presenting merchandise at high traffic locations to simulate unplanned purchases. (*) (*)

MAINTENANCE - (Also called Housekeeping). The technique of providing cleanliness, repair and utilization of all components within store. (*)

PACKAGING SOLUTION - Utilizes the packaging system as a means of demonstrating the product's benefits to the customer for an easy self selection.

NON-PACKAGING SOLUTION - Utilizes means other than the packaging system to achieve an intended results.

POINT-OF-PURCHASE ADVERTISING - Signs and displays at the point of final sale. POP is very flexible as to permanency, format, position, location. Its greatest problem is persuading the retailer to use it. Most of this problem is caused by the advertiser's failure to determine in advance the realistic probability of the retailer's being able to use the piece as the advertiser intends. (*)

SAMPLING MECHANISM - A technique used to provide information about the merchandise to the customer by demonstrating the product's properties through physical contact which allows touching (texture), smelling (scent), matching (color), using one's own senses and judgement.

SELF-SERVICE - Merchandise is so arranged in a retail store that the customer can make a choice without the aid of a sales person. Once the choice is made, the merchandise is handed to a nearby sales person who takes whatever steps are necessary to complete the sale.

SELF-SELECTION - Differs from self-service in that under self-service the customer not only makes an unaided decision, but brings the choice to a check-out station where payment is made and the purchase wrapped. (For the purpose of this study, self-selection represents only the action taken by the customer in selecting the desired merchandise). (*)

GLOSSARY

SECONDARY DISPLAYS PLACEMENT - Positioning of products other than on regular shelves, occupying special display units. Not always accepted by retailers. (*) (*)

SERVICE - All supporting activities within a store operation other than selling. (*) (*)

TRAFFIC - The movement of people/goods horizontally and/or vertically. (*)

(*) I. Shapiro, Dictionary Of Marketing Terms, Little, Field, Adams & CO. 1981.

(*) (*) Visual Merchandising - Chapters by 24 display and store Design Professionals, National Retail Merchant Association (NRMA), 1976.

APPENDIX B

FOCUS GROUP REPORT

The place: Rochester, NY.

The time: June 8 and 15, 1984.

The group: Women between the ages of twenty and forty-five years who are users of LFM purchased in self service retail outlets.

Objective: To determine what these women like or dislike about purchasing cosmetics in self service retail outlets, and to assess their buying patterns and preferences.

The purpose of these consumer discussion groups was to explore the issue from the consumer's point of view. The results are not necessarily representative of a larger population. Definitive conclusions should never be drawn from any focus group. Therefore, only key points from these discussion groups will be brought as follows:

- 1) LFM is the area in which most information is needed.
- 2) Hands-on examination of the product is important for making a purchase decision since it is impossible to determine the exact shade of the product just by looking at it.
- 3) Brand loyalty is influenced by affordability and product performance.
- 4) Trial sizes motivate trying more new products and a possible repeat purchase of the fully-priced package.
- 5) Sealed packages which provide protection from strange hands and contamination were favored by all.
- 6) The time-minded working woman is more likely to stick to the same brand because she lacks the time to search for new alternatives.

FOCUS GROUP REPORT

- 7) Most purchases of cosmetics at supermarkets and drugstores were part of shopping for household staples and not a special trip.
- 8) More guidance is needed for the different ways in which cosmetic products should be used and the matching of colors to individual skin-tones.
- 9) The inability to sample LFM before buying it may lead to a greater probability of picking the wrong shade and therefore encourage staying with the tried and true ones.
- 10) When there are no testers available, consumers tend to create their own by opening on-shelf packaged merchandise.

I would like to thank Mr. Fred Silverstein of FREDDY'S for generously providing free cosmetic products for each of the participants in the panel; Ms. Marion Simon of Marion Simon Research Service for donating two evenings at her facilities for this study and providing advice and help in recruiting the discussion participants; And I would like to express deepest appreciation to Dr. Julian Yudelsohn who volunteered his time, experience and advice and acted as a skilled, urbane moderator for both discussions.

FOCUS GROUP REPORT

The following are excerpts from the two discussions. Wherever possible, original phrasing was left intact.

Q.-- How often do you buy foundation (Great deal, Average, little)?

A.-- Not very often. I put it on very light and it usually lasts a long time.

A.-- I buy it when I run out. I wear makeup all the time, I do not go out of the house without it, sometimes more, sometimes less, depends on the situation or where I am going.

A.-- Twice a year, maybe, and I use it sparingly.

A.-- I rarely use it, only when I go out or for interviews. It would certainly change when I change my lifestyle from a student to a working woman.

A.-- I buy makeup every week and I buy for two, because I have a teenage daughter. Generally, my daughter shops with me.

A.-- I buy a lot because we go out a lot and I wear it once a day and sometimes twice. I do not work any more, but just out of habit, I have not stopped using any less. I use it even when I am staying around the house, because you never know who is going to show up at your doorstep. It is part of being dressed and ready.

A.-- I buy it about every three or four months.

A.-- I use it every day and even if I do not go out of the house. It is probably a habit.

A.-- I use makeup every day and sometimes twice a day. I wear foundation, blush, mascara, and usually lipstick.

Q.-- Do you prefer any particular brands?

A.-- I try a lot of different things. When I can afford it, I like to buy the more expensive things, when I can't, I buy the regular stuff -- Maybelline, etc.

A.-- I use "Cornsilk" and I have been using it for years. I use medicated type, oil-free products, because I have acne. My daughter has eye problems, so she uses hypoallergenic products.

A.-- I used to use the same brand until my saleslady moved out and I am shopping around now to get something that I really like.

FOCUS GROUP REPORT

- A.-- I like "Cover Girl" because it is medicated, like "Noxzema" and I have been using it for a really long time. I do not stop using something unless I start having problems with it.
- A.-- I use foundation but I do not use eye makeup. In the summertime I would use "Revlon"'s powdered blush, which I use on my face because it blends in my skin-tone. In the winter I would use liquid foundation, which is usually "Revlon" or "Cover Girl". I would buy something inexpensive as long as I get the suitable skin-tone. I do not think that it is necessary to spend a lot of money on it.
- A.-- I am trying to find replacement to my old brand and I have bought some stuff from "Avon" and I am not very satisfied with it. I also had a coupon for some "Wonder"...I am not sure which company makes it... I thought it was the color that I wanted, but it turned out to be too light, so I ended up mixing the two...
- Q.-- When was the last time that you tried some new foundation?
- A.-- I do that all the time!
- A.-- I am still experimenting. I have tried some "Maybelline", "Cover Girl" and also "Estee Lauder" at Sibley's. I also try things that my younger sisters use.
- Q.-- What are you looking for when you try something new?
- A.-- The consistency. Then the color and the availability. When I go to the drug store to buy something and my usual brand is not on the shelf, I would just buy something else.
- A.-- What I liked about my old makeup was that it was all natural, had a very fresh smell and once you put it on, the makeup went on very easily.
- Q.-- What spurs you to buy something new?
- A.-- Trial sizes! I like to try new things so if they have something that I like but in smaller size, I would want to try it. In seventy percent of the trials I will buy a larger size. Wegmans is open twenty-four hours a day and I spend a lot of time there and when everything is readily available you are more apt to buy it.
- A.-- That was how I switched to the other brand that I use now. I bought a trial size at Wegmans and then switched to a bigger bottle.

FOCUS GROUP REPORT

- A.-- Trial sizes are fun because you do not throw out four dollars or more. You may spend no more than a dollar and do not feel like you have lost anything.
- A.-- This is the advantage of not working during the day. You have the pleasure of being able to poke, where a working individual is very time-minded and more apt to stick with something to which she is accustomed, rather than shop around and experiment.
- A.-- I also need to go someplace and have my needs analyzed, but I do not have the time or the nerve...
- Q.-- What is a reasonable price for a sample size of two or three applications?
- A.-- Under a dollar. It would encourage me to buy and try new things. When I find what I like, I would buy the larger size.
- Q.-- Do you shop at department stores at all (for cosmetics)?
- A.-- (All) Too expensive !!
- A.-- I feel that in buying at department stores you pay more just for that reason.
- A.-- If you have difficulty in finding a color that would blend in your particular complexion, you would lean more to something specialized like that, where they can actually test the skin and tell you exactly what you need.
- A.-- You can tell the difference between expensive department store makeup and drugstore's just by applying some foundation on but I do not think that it is worth it.
- A.-- The thing that I hate about department stores is that the makeup counters are always on the main floor by the door. I never feel comfortable playing with makeup. When they have those make-over demonstrations, they wipe you down to things that you do not even want to see at home -- you feel stark naked, sanded, and people walk by and make suggestions... Why don't they put it up with the clothes, for example, where it is more private ?!
- A.-- Supermarkets put it near the drugs and it is not near the checkout counters, not too obvious that a lot of people will be trooping through and it is well marked "COSMETICS". Buying makeup for me is private. When I go to a drug store, it is not; but when I go to Sibley's and spend fifty dollars on makeup, I want it to be private, to be able to smell, to touch what I want to.

FOCUS GROUP REPORT

Q.-- Is the personal touch important to you?

A.-- The salespeople in department stores should know more about what is good for you, be more familiar with their products.

A.-- You can spend a fortune buying all this stuff. Who is going to spend three or four dollars more if you are not sure that it is the right tone, color?

Q.-- Is there any way that you can find that out? How do you go about picking from about twelve different beiges? It is a very subtle difference...

A.-- I use the kind that is called "transparent". If it is too dark or too light -- it is you, not the makeup.

A.-- If only they would open it and let you put some on. I don't know how many bottles I have got that I have never used because they were too dark or too light. You can't tell by the look of the bottle. It is like lipstick -- you can look at it; put it on your skin and it is a totally different thing.

A.-- Maybe if they had a few things open, a few testers, where you can test the color on your hand.

A.-- On the "Clinique" counter they have different lighting, so you can see the difference. In drug stores everything is sealed and the lights in those stores would not enable you to see exactly what you are buying. The last thing that I bought was in a sealed package and it turned up to be lighter than what I wanted.

Q.-- Does it influence at all, your staying with the tried and true shades?

A.-- (All) It sure does !!

A.-- You do not take a chance at the unknown. You can blow five or six dollars. I find it so for the foundation, but in eye makeup it is not that traumatic. You can make it a little lighter.

A.-- I put some foundation in my hand and then I put the other in and mix it.

Q.-- Is it mainly a problem with foundation, but not with mascara and eye-shadow, etc?

A.-- It is also hard to tell about blush and lipsticks, but not the mascara and eye-shadow.

FOCUS GROUP REPORT

Q.-- What about the availability of salespeople at drug stores?

A.-- (All) Forget them !!

A.-- It is almost all self service. At Freddy's there is someone behind the counter that you can ask questions but it is usually for the more expensive stuff.

A.-- How would you feel about getting some personal assistance at drugstores ?

A.-- Drugstores used to do so. They should. I have seen counters at some of the CVS's. It looked that there should be somebody in, but I have never seen any...

A.-- I would feel funny because I am not used to get any personal help at drugstores.

Q.-- I was observing in a drugstore a few days ago, and noticed a woman behind an aisle taking some foundation bottles and trying the content on. Is this a problem or is she a rare view ?

A.-- It is definitely a "NO-NO", I mean, you are not supposed to do that and most of the things are so sealed that even you can't get into them.

A.-- I am not too crazy about the idea...

A.-- It is very unappealing to think that someone else might have tried your cosmetics. It is like buying makeup at a garage-sale.

A.-- I've never seen anybody open it up in a drugstore, because usually they are sealed in these plastic things and, true to God, if you can get into it, you are doing well! Even when you get home you can't get into the thing, I always get the scissors first...

Q.-- Some of the lines, other than "Maybelline" and "Cover Girl", are not in blister-packs. They may have screw-on caps and things of that nature.

A.-- You can get into them. Some of them even have those sealed plastic bands around the neck. I have noticed that on "Almay". I would not even look at "Almay" just for that reason. You can get into the bottle so easily, you just have to twist it off, no bindings. It is not that I think that someone will put something bizarre in it, it is just the contamination.

A.-- Even testers of lipsticks -- I wouldn't even go near that kind of stuff. Fifty million fingers have been on this little thing -- disgusting !!

FOCUS GROUP REPORT

- A.-- It is different in some of the stores where they would give you a cotton ball, then you feel it is supervised.
- Q.-- Do you feel that sampling is a safety problem ?
- A.-- (All) No !
- A.-- It is just the idea that you can get into it so easily, that somebody with dirty fingers, God knows where they were, could have just blown their baby's nose...
- A.-- Anything that you use for your personal needs should have a safety device on it. Also, people use it in the store and put it back on the shelf and you end up getting three-quarters of the bottle!
- Q.-- I wonder if that woman that I have seen was unusual or that it is common.
- A.-- If I had seen it, I probably wouldn't have used that product ever again.
- Q.-- And if the seal is broken and it becomes a tester ?
- A.-- Then it is okay.
- Q.-- Is there much of people creating their own testers ?
- A.-- Good idea !
- Q.-- A number of you said that you want something that you can sample and that is important to you, but if it is too easy to do, it becomes a turn-off.
- A.-- It is the same reason why I wouldn't try or test lipsticks. Even if you hold it up to your lips, you still can't tell. I have to see it on.
- A.-- I always try them on my hand.
- A.-- It does not really bother me, because I will take one from the back ! (All laugh). Many times I find that people have opened up the same bottle and left it as a tester anyway, figuring there should be one. They really should have testers for everything.
- A.-- In CVS, for example, they have testers for the perfumes and for the foundation, that you can put a little on your hand and rub it, so you would not end up with twenty bottles in twenty different shades contaminated.

FOCUS GROUP REPORT

- Q.-- Everybody says: "I would like to test the one that nobody has tested" and you end up with all of them open...
- A.-- I would like to see them sealed. It's not that I think that someone would put acid in the foundation, but it says a lot about the product. The company is concerned about the safety of the consumer.
- A.-- ...But not concerned enough to give us samples.
- A.-- Free samples. There are not enough coupons for cosmetics.
- Q.-- How much do you need to sample ?
- A.-- (All) Finger's worth. You just test it on your hand.
- Q.-- What would you be looking for in this tester? Do you want something that your hands can't get into?
- A.-- (All) With testers you don't really care!
- A.-- At the World's Fair, "Clairol" had a display where you could see your head in a special mirror wearing different hair colors just by switching a special device.
- A.-- But that is like a color-chart, you never know if it is the same color.
- A.-- If they had a supervised counter where you can sample these things and then go back and buy it off the rack.
- A.-- Dispensers where you could try just a drop or little pouches with the product.
- A.-- I have been to places where they have had a little jar with a little spoon that you dip in, rub it on your hand and just toss it away. Only your hand will be on that thing and then you discard it (the spoon).
- A.-- Or a sample of slightly different color in every purchase of makeup to match the skin-tone in different seasons.
- Q.-- Do you have more than one shade of foundation at the time or do you wait until one is gone ?
- A.-- I would change it according to the season. It's not like blush where you would try to match it to what you wear.
- A.-- I always wear lighter shades in the winter and darker in the summer because I am out in the sun, and in the winter my face is not that dark.
- A.-- I wear the same color all year round and just try not to get out in the sun.

FOCUS GROUP REPORT

- Q.-- When do you buy cosmetics? Is it a special trip or is it while you are shopping anyhow?
- A.-- Availability is important. When I am at the supermarket or CVS, I buy the stuff when I see it or need it.
- A.-- Usually as I need it.
- A.-- I buy when I am shopping. There are more trial sizes now, maybe they started to realize that people want to try it before they spend more than a dollar.
- Q.-- Do you like to try new things ?
- A.-- Eye makeup is really exciting. It is like buying a new blouse. You feel like a different person with something new on your face.
- Q.-- Would you like to try new things more often than you do?
- A.-- The time factor is important. A working person would stop at certain stores.
- Q.-- Do the manufacturers and the retailers make it easy or hard to buy cosmetics?
- A.-- It is easier because now they offer at supermarkets things that used to be available at drugstores only. That way more people are going to see it. Supermarkets have more room than drug stores.
- A.-- I buy all my cosmetics at drugstores because it is so easy. They have racks of it, aisles of it -- you can fill up a whole basket and I do. Freddy's is fun, but you can't get through there any more, not to mention stopping along the aisle to read the ingredients or compare prices. The traffic...
- A.-- I used to buy my foundation at Fay's but since I have discovered that it is less expensive at Freddy's, I buy it there.
- Q.-- What do you think of getting an actual sample of foundation through the mail?
- A.-- (All) Sure! Love it! Good idea!
- A.-- They send you a lot of shampoo through the mail, but not makeup.
- A.-- I have ordered products from the "World of Beauty" where you check your skin type and color and they send you free products. Many times I have ordered the larger size.

FOCUS GROUP REPORT

- A.-- That's what is so good about trial sizes, you can try different things without being stuck with whole how many of them.
- Q.-- Do you have any preferences in the way the product is packaged? (Glass bottles, plastic jars, etc.)
- A.-- The cheapest way.
- A.-- Plastic. It is lighter and when I travel I carry one in my purse. I don't want the top to come off, as in glass.
- A.-- Even in the morning by the sink, I have dumped many bottles and broken them, so I also prefer plastic.
- Q.-- How much do you respond to advertising of new products?
- A.-- I don't believe any of them, they are not real.
- A.-- They think that it is a great product, but it is not great for some people. I had a lot of makeup that made my face break out.
- A.-- Very much. Mainly magazines and especially when they have coupons in them.
- A.-- When I go to the store, I wouldn't buy anything that I haven't heard of. If I did, then I would buy it. It feels -- "that's okay, I have heard about it before".
- A.-- If I have been using the product for a long time, I don't think that a commercial can sway me.
- A.-- I bought "Aziza" because of their advertisement.
- A.-- You recognize brand names, but if you have a large display with everything you would see it. Few items would not be seen.
- Q.-- How many of you read magazines with makeup advertising?
- A.-- Cosmopolitan, Better Homes & Gardens.
- A.-- Redbook, Madmoiselle, Glamour.
- A.-- Popular Mechanics...
- A.-- Seventeen, because of my daughter.
(All the others watch television).

FOCUS GROUP REPORT

Q.-- How do you share information?

A.-- People comment on my appearance, nail color. I would ask someone what color they use.

A.-- I can't think of any instance I have ever had where I would even look and say: "My God, I like your foundation!" If it is effective you would not see it anyway.

Q.-- Supermarkets and drugstores have candy bins next to the check-out counters, so you can impulse-purchase it while waiting in line. One of you even mentioned that she had finished a whole candy bar without noticing it, while waiting. How would you feel about makeup bins where the candy bins are?

A.-- I would grab them. Especially lipsticks and eye makeup. But I am not sure about foundation.

A.-- Sample sizes, definitely.

A.-- A lot of colorful things, which you wouldn't buy unless they were there, staring at your face.

Q.-- It seems that foundation is the area where you will need the most information in sampling. The right shade is important and really makes the difference. Do you feel that more visual information such as graphic displays, posters showing several women who have different skin-tone and the suggested shade that can be used in each case, etc...?

A.-- People's skin is not the same even during different seasons. I would like to have additional information about the shades which are going to be right for me when, for example, I have tan.

A.-- Something like that can guide about the "in" things. Colors are more or less the same but they are applied on so much differently. A chart like this can be helpful in knowing what colors go together and how to apply them. So, this will be a kind of thing I would pay attention to.

A.-- I need the personal touch. In drugstores you go in and out so fast that you don't really see it.

A.-- It would tempt me to buy the color that the model is wearing, if she has the same complexion as mine. Even charts where you can fill in your skin type and tone and they tell you what you should use.

APPENDIX C

EXAMPLES OF DISPLAY LAYOUTS

There are three basic merchandising techniques recognized as achieving high turnover through placing the right product in the right place at the right time in the right quantity and for the right price:

Horizontal Strip -- The products of the same line are displayed left to right (largest on the right) or side by side across the shelf. Horizontal stripping lends itself to almost any package size.

Vertical Strip -- Products of the same line are displayed top to bottom (largest at eye-level), or up and down on successive wall shelves. Vertical stripping lends itself to medium or large size packaging such as hair spray or hair color.

Hot - Cross -- This method is best applied to medium or small size packaging. Due to general lack of gondola height necessary to maintain in-store visibility, hot-cross is best applied on wall shelves so that the center of the cross is at eye-level.

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"...good traffic flow also depends on specific placement of gondolas. Ideally, they should be 16" deep by 60" high and should have promotional ends. Most important is that the runs should be continuous without cross aisles....for example, in a store with five gondolas, if 5 feet are taken out of each run, 50 running feet of display are lost (5 running feet on each side of each gondola).

EXAMPLES OF DISPLAY LAYOUTS

In addition, the customers lose eye contact with the shelf-edge 2 feet prior to entering the cross aisle. Upon leaving the cross aisle and going into the next run, the customer will not pick up eye-contact with the shelf-edge for another 3 feet. So, in effect, 20 feet of display are lost for each cross aisle. This is approximately 20% of the store's actual display capacity."

(Source: "Remerchandising -- Breakthrough To Bigger Sales",
Drug Topics, March 1, 1978, pp.43.)

APPENDIX D

CHOSEN BRANDS IN DRUGSTORES

The following are the chosen brands in drug stores based on Drug Topics survey of 132 chain drug stores' headquarters and almost four hundred independent drug stores nation-wide, 1981.

Independent

Maybelline (80%)
Noxell(Cover Girl)(68%)
Jovan (68%)
Max Factor (65%)
L'Oreal (65%)
Revlon (61%)
Revlon(Natural Wonder(48%)
L'erin (21%)
Revlon(Ultima II)(20%)
Lancome (12%)
Coty (11%)
Stendahl (9%)
Allercreme (6%)
Almay (6%)

Chains

Noxell(Cover Girl)(93%)
Maybelline (92%)
Revlon (92%)
Revlon(Natural wonder)(88%)
Jovan (87%)
Max Factor (86%)
L'Oreal (83%)
L'erin (44%)
Revlon(Ultima II)(22%)
Bonne Bell (12%)
Aziza (12%)
Coty (12%)
Almay (12%)
Helena Rubinstein (10%)
Elizabeth Arden (8%)
Lancome (8%)
Stendahl (5%)
Allercreme (5%)

Source: Drug Topics Survey, Drug Topics, May 15, 1981,
pp.30-35.

APPENDIX E

SURVEY OF RETAILERS

"Testing and sampling are effective P-O-P tools...", and "...testers that house all (fragrances) in one very attractive unit would be the biggest help." (Richard Johnson, HESS'S, Allentown, PA).¹ The advantage of P-O-P displays equipped with testers, according to retailers, is a significant cutback on returns due to right choice the first time. P-O-P displays also maintain in-store visibility without any further assistance in times when retailers are trying to cut costs by restricting the sales staff's weekly hours,

However, there are some clear disadvantages to many of the currently available displays. According to retailers, tester units are often too big and customers select specific colors by applying them first to the display unit, thus damaging and messing the unit.²

Some retailers prefer to use a store's custom-designed units which answer their specific needs, more than the units provided by the manufacturers. Preferences for specific displays may vary among retailers, but the common basic concerns remain the same: size, cost, effectiveness and rate of merchandise movement. These needs and limitations should be addressed by the manufacturers who develop displays for color cosmetics.

¹A. Modugno, "P-O-P 'Bombardent' Concern Retailers", Product Marketing, May 1985, pp.18.

²A. Modugno, "P-O-P Draws holiday Shoppers 'On Impulse'", Product Marketing, June 1985, pp.22.

March 30, 1984

Ms. Osnat Lustig
Graduate Program, Dept. of Packaging Science
Rochester Institute of Technology

Dear Ms. Lustig:

You've put your finger on a sensitive problem for cosmetic marketers, sampling or testing of shelf stocks in self-service outlets. There is, however, very little published on this subject, either in our magazine or in the other trade publications that go across my desk. By the way, the initials otc or OTC tend to be interpreted in the drug context, especially in the mixed atmosphere of retailing found in a community or chain drug store.

The principal tactical moves taken to forestall such sampling have worked rather well. These include:

1. Positioning within a store. Both to frustrate shop-lifting and to prevent testing compacts for makeup and eye shadow are often kept directly on or located very near the one cosmetic counter in the store. Color charts are incorporated into counter displays (again, where possible) and the thought is that the consumer will seek assistance from the one sales person near by.
2. Packaging. In large self-service stores including chain drugs and Woolworth-type stores, card or blister packaging has become the rule where no sales person surveillance is possible. These packages have been designed to frustrate easy entry, the plastic usually being tough enough to prevent all but the most persistent tamperer.
3. Extra tamper-proofing, also a part of packaging, includes double-glued flaps, plastic overwraps actual use of seals, and a bevy of other devices and techniques.

With all this, of course, there is some sampling and theft that is inevitable. My sense of industry feelings on this, however, suggests that if industry losses escalate, the marketers will simply resort to tougher plastics and stronger glues rather than give up on the self-service concept.

Very truly yours,

Donald A. Davis

Donald A. Davis
Editor

Longs Drug Stores



General Offices:

July 18, 1985

Osnat Lustig
Graduate Program
Dept. of Packaging Science

Dear Mr. Lustig:

Your letter was referred to me by Mr. William Combs recently. The following is in answer to your questions:

- Customers creating their own testers among the liquid foundation makeup product is a problem that is very common. We generally make our own testers and ask the vendor to offset the cost in some manner to prevent consumers from making their own.
- Testers provided by manufacturers have proven to be VERY effective.
- The advantages of testers that are provided by the manufacturer are; customers get a hands-on feel and look for the product and can better determine what is right for her/him. We generally receive testers from the manufacturers we deal with, if not, we may develop our own.
- Space for point-of-purchase displays is determined by each store. Manufacturers follow somewhat of a guideline depending on each store's policy.
- Turnover time of such displays varies depending on the manufacturer. We may display anywhere from 2-15 displays at a given time.
- Displays positioned above eye level can still be effective depending on the item.
- The advantage of using manufacturer's display units over using the store's own units is that, manufacturers displays usually tell a good story about the product shown since they were specifically designed for that particular product.

- Trial sizes do very well in most of our stores. They provide a good way to sample customers on product especially new introductions, also they are very good for travel. There are not many problems on overstocks as our personnel are very well trained in stock control.
- Decisions on the brands of trial sizes we carry are based on new product innovation, advertising support and price appeal to consumers in a given market place.
- Yes, there are free samples available for consumers through many franchise cosmetic houses.
- From the retailers' point of view, the ideal tester bottle with an applicator or small sample packets available in different shades would be the best.

I hope this information provies to be helpful to you in your studies.

Sincerely,

LONGS DRUG STORES

Denise Boyer

Denise Boyer
Merchandise Administrator

/ts

cc: William Combs

SURVEY OF RETAILERS

An interview with Mr. Jackson, manager of Thrifty Drug Stores, Ygnacio Plaza, Walnut Creek, California, took place on May 15, 1985. Photographic examples of cosmetics displays in that store follow excerpts from the interview.

- The main problem in sampling is with the young customers, the teen-agers. They actually come to the store to use the makeup with no intention to buy it. The only thing that we can do is to send a sales person to "assist" them and to keep an eye on them this way.
- P-O-P displays are very good, they are visible and effective. Every month we receive about four or five new ones and use them when and where there is available space. Some of them are indeed above eye-level, but they sell anyway...
- We have some new fixtures that allow us to place the tester in front of the shelf display (attached to the shelf), but they are awkward and hide the product itself.
- There are no specific guidelines for arranging merchandise in the store(pretty much where space is available), but the brands that we carry are determined by the marketing division at the Thrifty's headquarters.
- We do not use any free samples, only through manufacturer's promotions such as G-W-P (gift with purchase).
- The problem of testing/sampling can be solved by more personal assistance, which we cannot afford, and more testers, but we have a small store and I cannot spare too much space for it. Well, if somebody needs to find the exact color -- I think that she should go to a department store...

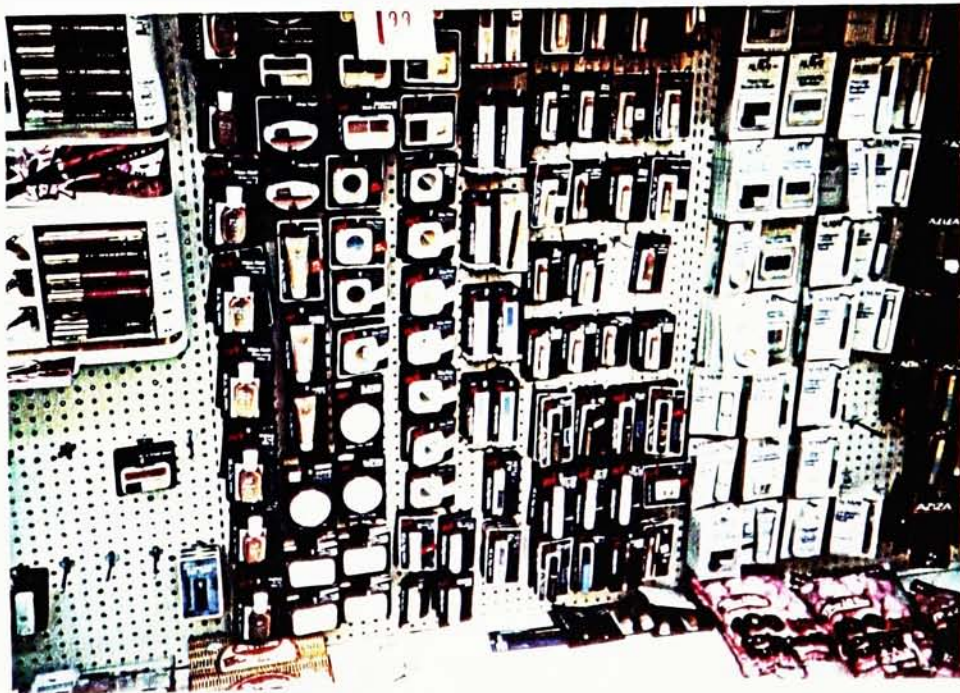
SURVEY OF RETAILERS



Typical presentation of pegged cosmetics,
shelf display and P-O-P display units.

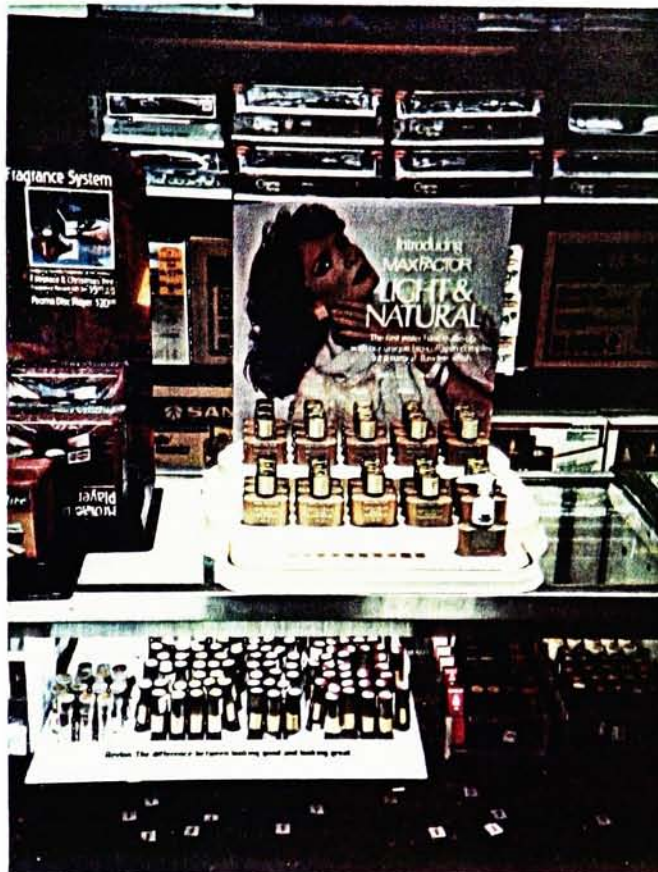


Variety of LFM products as displayed on
a drugstore shelf.



Pegged cosmetics on a wall fixture.

SURVEY OF RETAILERS



A typical F-O-P display unit for LFM as found in drugstores.



Fragrance display with individual testers.

APPENDIX F

PACKAGING SYSTEMS COST REVIEW

This review addresses only the cost aspect of the systems in discussion from the production/distribution point of view, disregarding any other aspects which may be involved. Part of the worthiness of any individual system depends on the effect of fixed and variable costs of the system. The following factors have a significant contribution to the total cost per unit and the cost of the entire system:

- A. Volume (high/low; number of users; frequency of orders).
- B. Number of packaging components (more components lengthen production line).
- C. Type of packaging components (generic/stock; custom-made).
- D. Layout of production line (efficiency; ease of line modification).
- E. Size and shape of unit (distribution and handling).
- F. Lead time (short; long).
- G. Material handling of the secondary container (conveyor systems; unitizing systems; storage and retrieval systems; warehouse and carrier cubage utilization; damage claim level).

PACKAGING SYSTEMS COST REVIEW

	TYPE OF PACKAGING COMPONENTS			
	GENERIC/STOCK		CUSTOM DESIGN	
	high Volume	low volume	high volume	low volume
Start-up cost	low	moderate	high	high
Second level cost	moderate	high	low	high
Lead time	short	short	long	long
Line modification	easy	easy	complex	complex

	SIZE OF THE UNIT			
	LARGE		SMALL	
	high Volume	low volume	high volume	low volume
Distribution cubage	high	low	moderate	moderate
Distribution cost ¹	high	moderate	low	moderate

¹Distribution cost involves number of units/users, as well.

	NUMBER OF PACKAGING COMPONENTS	
	HIGH	LOW
Production line	long	short
Production line cost	high	low

PACKAGING SYSTEMS COST REVIEW

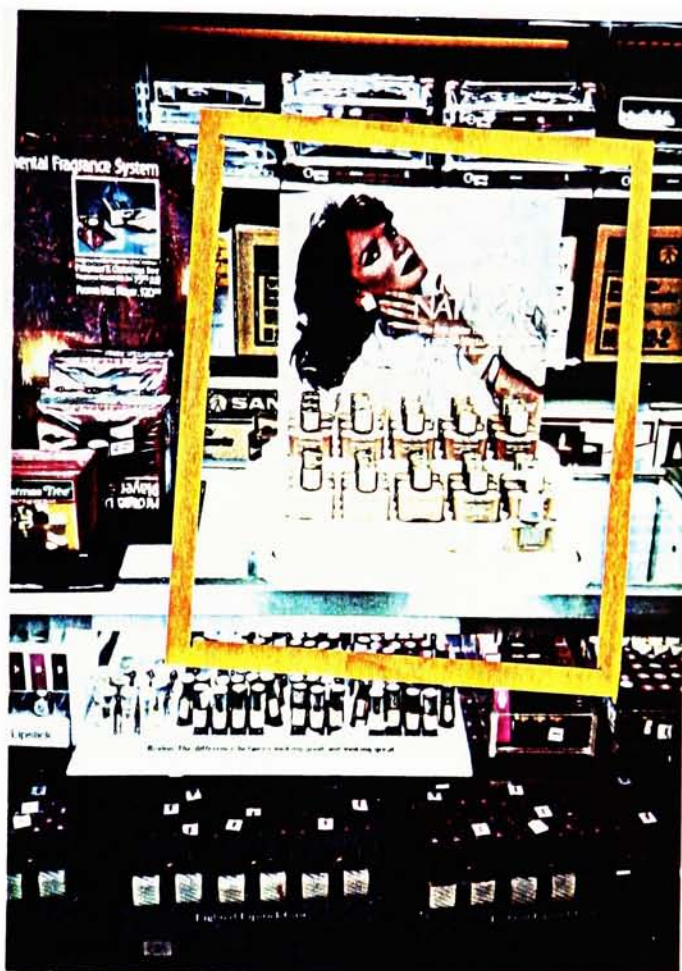
The information above gives a basis for estimating the suitability of various packaging systems for either high or low volume of production. An example given below is followed by a description of typical sampling systems which were used for evaluation in this study.

SYSTEMS SUITABLE FOR HIGH-VOLUME PRODUCTION

- A. Trial size
- B. Free samples
- C. One sample (for in-store dispensing)
- D. Graphic techniques (printing)

SYSTEMS SUITABLE FOR LOW-VOLUME PRODUCTION

- A. N-dispenser in P-O-P unit
- B. One sample + printed color chart (for in-store dispensing)



Product - Thermoformed plastic tray holding 30 bottles + one tester and a riser.

of units - 15,000

Bottles (generic)

Volume - 1 fl.oz.

Material - glass

Closure - primary caps + one pump closure

Graphics - White silk screen printing.

Tray

Material - High impact polystyrene

Riser

Material - Paperstock laminated to corrugated board

Graphics - Offset printing

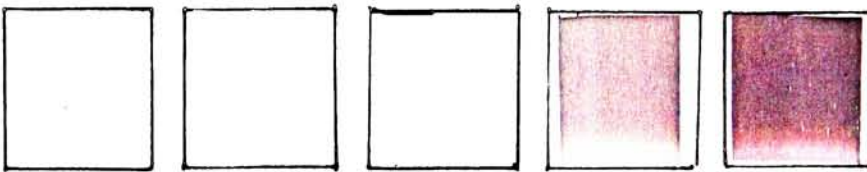
-Long Wearing make-up

It's not just how good you look...
but how long you look good.

A lovely, natural look. A simply beautiful look.
You'll notice the difference with Long Wearing
make-up by Maybelline.

Maybelline's special long-lasting formula
was developed to wear beautifully. It feels light
to the touch, blends easily, comes in a spectrum of
naturally soft shades. One is just right for you.

Long Wearing make-up by Maybelline keeps you looking
good all day.



I'm At My Best With
Maybelline
© 1984 Maybelline Co.

Long Wearing make-up.

Product - Printed chart with silk-screened color samples (for store display use)

of units - 100,000

Size - \pm 8" x 5"

Graphics - Offset printing

Material - paperboard

Silk-screened swatches die-cut and adhered separately to the
format to achieve maximum accuracy in color reproduction.



Product - Thermoformed plastic tray holding 6 tester-bottles

of units - 15,000

Bottles (generic)

Volume - $\frac{1}{2}$ fl.oz.

Material - glass

Closure - pump closure and a primary cap

Graphics - white silk-screen printing

Tray

Material - High impact polystyrene

Riser

Material - Paperstock laminated to corrugated board

Decoration - Offset printing



Product - Carded bottle (blistered or skinned)

of units - 100,000

Volume - $\frac{1}{2}$ fl. oz.

Closure - Primary cap

Material - glass (generic bottle)

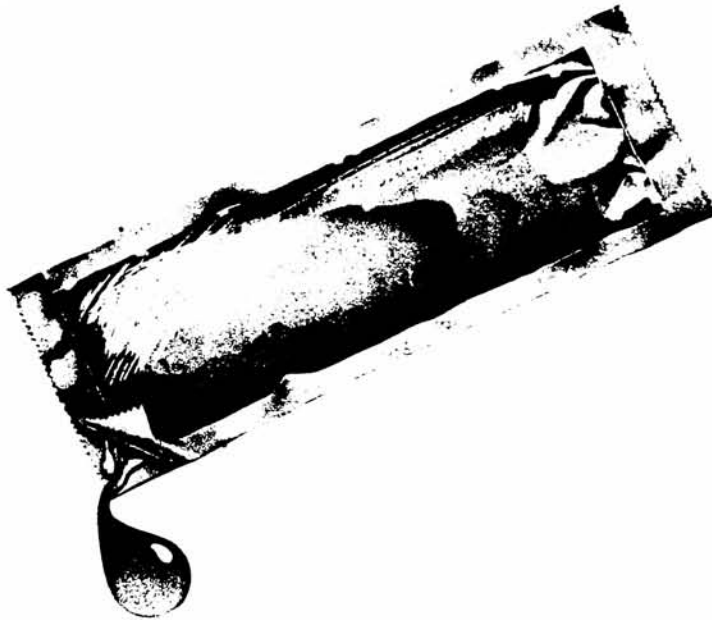
Graphics - white silk screen printing

Blister/skin card

Material - paperboard

size - \pm 3" x 4.5"

Graphics - Flexography



Product - Flexible pouch

of units - 100,000

Style - Four-side seal pouch

Volume - $\frac{1}{4}$ fl.oz.

Material - Saran coated polyester

Size - $2\frac{1}{2}$ " x 3"

Graphics - 2 colors flexography

Production layout - nine across a double web of 18 fronts and backs, slit and matched in a vertical FFS machine.

Cycle - 425/minute

The natural-looking blush with the silky touch.

Brush on the blushing softness of colors like Soft Misty Pink or Soft Fresh Peach. Feel the silky softness glide across your cheeks.

Choose Brush/Blush in an array of naturally soft shades and subtly frosted shades.

Or try the Brush/Blush II collections. Each one has two complementary colors—a fresh matte for coloring and contouring and a shimmering frost for shaping and highlighting. Like Soft Burgundy and Petal Frost.

Brush/Blush and Brush/Blush II. Soft blushes with a silky touch. Naturally beautiful.

Maybelline® Brush/Blush

© 1983 Maybelline Co.



Product - Printed color chart (for store display use)

of units - 100,000

Size - 8" x 5"

Material - Paperboard

Graphics - Offset printing

APPENDIX G

REVIEW OF RELATED PACKAGING PROBLEMS

Effective information transmittal between the marketer and consumer is a vital part of any marketing process, since it stimulates the consumer to make a purchase decision. Lack of ample information about the product will undermine marketer's effort to increase sales. Here are several examples showing information transmittal techniques used in areas other than cosmetics.

- A. The pharmaceutical industry utilizes unit-dose application packets which contain preservative-free solution, radiation sterilized. Another example is a multi-compartment burst-seal package that simplifies production and packaging of non-compatible components which must be mixed at the point of use.
- B. Fast-food chains supply items such as salt, pepper, catsup, cream, etc., in unit-dose packages.
- C. Paint and ink suppliers provide quality printed color charts which give the consumer information about colors and texture available.
- D. Supermarkets promote food items through in-store demonstrations which offer cooking and serving suggestions.
- E. Vitamins are often sold as a trial-size die-cut, fold-over cards, which hold samples of the product. A lidded blister is combined in a card printed with product information.

REVIEW OF RELATED PACKAGING PROBLEMS

The following table reviews and compares the attributes of the various techniques:

CHARACTERISTICS	A	B	C	D	E
system cost:					
production start-up	high	moderate	moderate	low	high
second level (retail and distribution)	low	low	low	low	low
production time	short	short	moderate	short	short
volume capabilities	high	high	moderate	low	high
availability of raw materials	very good	very good	very good	very good	very good
adaptability to production line	fair (1)	good	very good	—	fair (1)
versatility	good	good	poor	good	good
lead time	long	moderate	short	short	long
energy cost	high	moderate	moderate	low	high
number of components (2)	1-2	1-2	1-2	varies	2-3
durability & permanency	very good	very good	fair	poor	very good
eye appeal	very good	very good	very good	varies	very good

(1) Requires custom design equipment. High production volume will counterbalance high start-up cost.

(2) Range of production equipment depends on the number of packaging components.

A -- Pharmaceutical unit-dose application packets.

B -- Fast-food unit-dose packets.

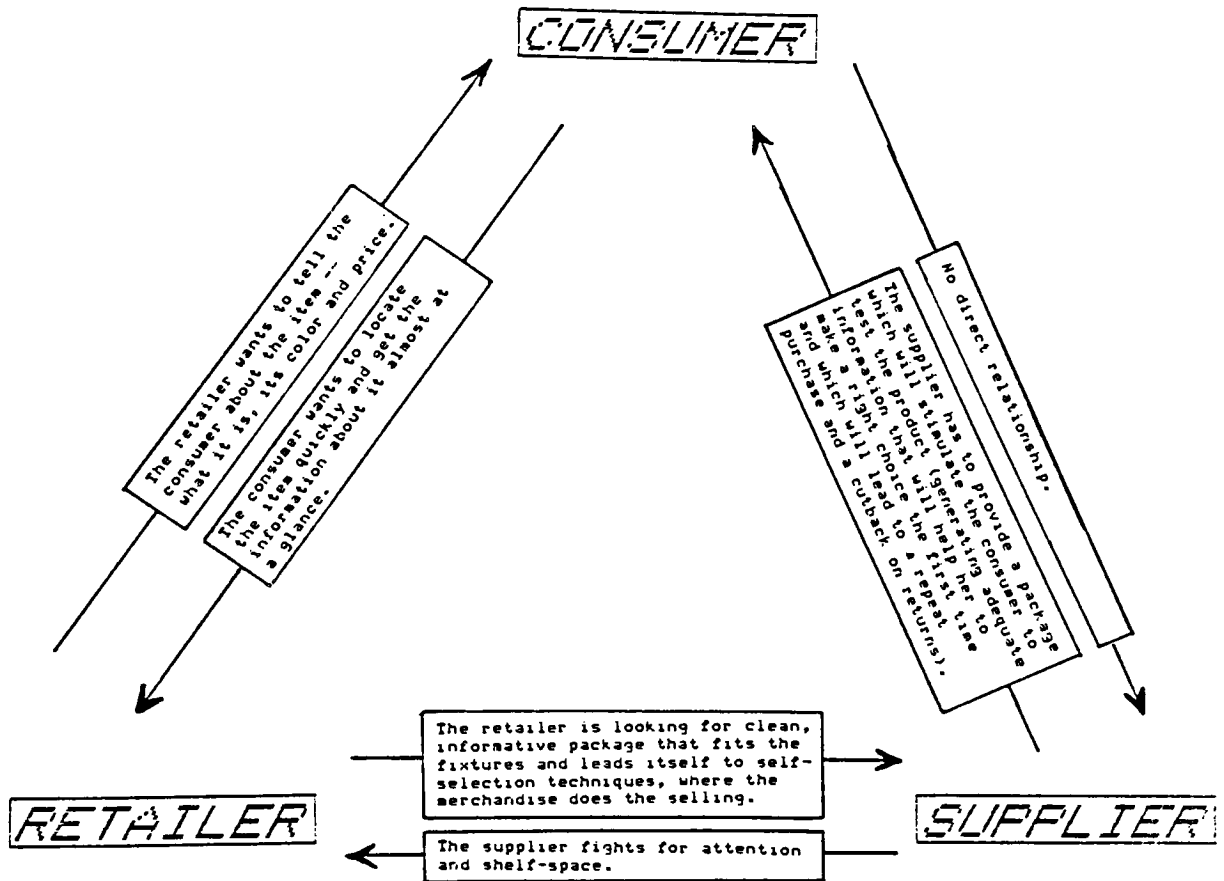
C -- Paint and ink quality printed color charts.

D -- Supermarkets' in-store demonstrations.

E -- Vitamins' fold-over cards.

APPENDIX H

RELATIONSHIP BETWEEN SUBJECTS OF THE STUDY



BIBLIOGRAPHY

Books

- S. Dukta and I. Roshwalb, A Directory of Marketing Research, Audit And Surveys, second edition, 1983.
- P.E. Green and F.J. Carmone, multidimensional Scaling and Related Techniques in Marketing Analysis, Allyn & Bacon, Inc. Boston, MA, 1970.
- P.E. Green and Y. Wind, Multiattribute Decisions in Marketing A measurement Approach, Dryden Press, Hinsdale, IL, 1973.
- J.C. MacChesney, Packaging of Cosmetics and Toiletries, Butterworth, London, 1974, pp. 21.
- J.M. Madden, Microbiological Methods for Cosmetics, FDA Bacteriological Analytical Manual, 5th edition.
- I. Shapiro, Dictionary of Marketing Terms, Little, Field, Adams & CO., 1981.
- Visual merchandising -- Chapters By 24 Display and Store Design Professionals. National Retail Merchant Associattion (RAMA), 1976.

Monographs

- W. Litsky, "Insuring Food Quality by Tamper-Proof Packaging", from a paper presented at the Food Quality and Family Health Session, 107th meeting of the American Public Health Association (APHA), New york, New York, November 6, 1979.

Articles

- W. Abbott, "Beauty Finds New Outlets of Expression", Advertising Age, February 28, 1983, pp. M-16.
- "Beauty Products Enhance 'Executive' Women's Image", Product Marketing, October 1984, pp. 1.
- G. Binetti, "On Line Information Retrieval Aids New product Development", Industrial Marketing Management, July 1980, pp. 247-251.
- "Buying Habits Studied", Product Marketing, June 1984, pp. 1.
- T. Cannon and R.W. Hasty, "Identifying and Defining Consumer Needs Using Human Factors and Market Research Techniques", Advances In Consumer Research, 1977, pp. 494.

- "Coping With Curious Shoppers", Packaging Digest, November 1983, pp. 70.
- "Cosmetics Departments Retain Market Supremacy", Drug-Store News, December 12, 1983, pp. 59.
- E.H. Demby, "How Marketing Research Can Help Avoid Missing Opportunities in The Cosmetic Jungle", Marketing News, January 16, 1976, pp. 5.
- "drug Chain Brace For Cosmetics Revolution", Drug Topics, July 18, 1980, pp. 57.
- " Drug Topics Survey", Drug Topics, May 15, 1981, pp. 30.
- G.D. Harrell and M.D. Hutt, "Crowding in Retail Stores", MSU Business topics, Winter 1976, pp. 33.
- "Health & Beauty Aids--Cosmetics", Chain StoreAge/Supermarkets, July 1983, pp. 157.
- P.M. Hyman, "Legal Considerations of Tamper Resistant Packaging for Cosmetics", Soap/Cosmetics/Chemical Specialties, July 1983, pp. 56.
- E.J. Johnson and J.E. Russo, "Product Familiarity and The Ability To Learn New Product Information", Advances In Consumer Research, 1980, vol. 8, pp. 151.
- R.D. McFadden, "Poison Deaths Bring U.S. Warning On Tylenol Use", New York Times, October 2, 1982, pp. 1.
- A. Modugno, "P-O-P ' Bombardment' Concern Retailers", Product Marketing, May 1985, pp. 18.
- , "P-O-P Draws Holiday Shoppers 'On Impulse'", Product Marketing, June 1985, pp. 22.
- L.J. Morse, H.L. Williams, F.P. Grenn, Jr., E.E. Eldridge and J.R. Rotta, "Septicemia Due to Klebsiella Pneumonia From a Hand Cream Dispenser", New England Journal of Medicine, 1967, vol. 277, pp. 472.
- "Remerchandising--Breakthrough to Bigger Sales", Drug Topics March 1, 1978, pp. 43.
- I. Rosendahl, "Teen-Agers Buy More Beauty at The Drug Store", Drug Topics, February 7, 1983, pp. 72.
- R.J. Rothstein, "How Much Should You Carry?", Drug Topics, May 15, 1981, pp. 30.

- M. Shaffer, "Chain Wage Battle For Cosmetics Market", Drug Store News, June 24, 1985, pp. 15.
- R. Smart and D.F. Spooner, "Microbiological Spoilage in Pharmaceuticals and Cosmetics", Journal of the Society of Cosmetic Chemists, 1972, vol. 23, pp. 721.
- "Should Leaves For New Parents Be Mandatory?", New York Times, December 29, 1985, pp. 15E.
- G.L. Smith and L.B. Archer, "A Methodology for Consumer Design", Proceedings of the Seventeenth Annual Meeting of the Human Factors Society, Santa Monica, CA, 1973, pp. 105.
- E.M. Tauber, "Discovering New Product Opportunities with Inventory Analysis", Journal of Marketing, January 1975, pp. 67.
- "Toiletries, Beauty Aids, Cosmetics and Fragrances", Fairchild Fact File, Fairchild Publications, Division of Capital Cities Media, Inc., New York, 1980.
- "25-34 Market -- The Beauty of Marriage and Career", Product Marketing, Spring 1982, vol. 11, pp. S-4.
- L.A. Wilson and D.G. Ahearn, "Pseudomonas Induced Corneal Ulcers Associated with Contaminated Eye Mascaras", American Journal of Ophthalmology, 1977, vol. 84, pp. 112.
- L.A. Wilson, A.J. Julian, D.G. Ahearn, "The Survival and Growth of Microorganisms in Mascaras During Use", American Journal of Ophthalmology, April 1975, vol. 79, pp. 596.
- "Women's Shopping Habits in Chain Drug Stores Analyzed", American Druggist, September 1981, pp. 68.